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SMALL WATERSHED PROGRAM

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON WATERSHED DEVELOPMENT

OF THE

COMMITTEE ON PUBLIC WORKS HOUSE OF REPRESENTATIVES

EIGHTY-SIXTH CONGRESS

SECOND SESSION

Part 2

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SMALL WATERSHED PROGRAM

MONDAY, MARCH 28, 1960

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON WATERSHED DEVELOPMENT
OF THE COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The subcommittee met at 10 a.m. in room 1304, House Office Building, Hon. Frank E. Smith (subcommittee chairman) presiding.

Mr. SMITH. The committee will be in order.

We have four watershed projects for consideration this morning. Two of them are related.

EAST FORK POINT REMOVE CREEK WATERSHED, ARKANSAS
WEST FORK POINT REMOVE CREEK WATERSHED, ARKANSAS

The first projects we will hear this morning will be the East Fork Point Remove Creek watershed and the West Fork Point Remove Creek watershed in Arkansas.

We will ask Congressman Trimble of Arkansas if he cares to make a statement about them before we call on the Soil Conservation Service people.

STATEMENT OF HON. JAMES W. TRIMBLE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARKANSAS

Mr. TRIMBLE. Mr. Chairman and members of the subcommittee, it is with deep gratitude that I appear here this morning on behalf of these two projects which are being submitted by the Soil Conservation Service. They are very worthwhile, very necessary, and I urge the approval of the request of the Soil Conservation Service.

Thank you very much.

Mr. SMITH. Thank you, Mr. Trimble.

Who will make the presentation on behalf of the Soil Conservation Service?

STATEMENT OF JOHN H. WETZEL, DIRECTOR, WATERSHED PLANNING DIVISION, SOIL CONSERVATION SERVICE

Mr. WETZEL. Mr. Chairman and members of the subcommittee, it is with a great deal of pleasure that we present and explain the first two projects to come before this subcommittee during this session of Congress. With your permission, I would like to explain these two projects at the same time. They are the East Fork Point Remove Creek watershed and the West Fork Point Remove Creek watershed. The West Fork Point Remove Creek joins the East Fork Point Re-

move Creek to form Point Remove Creek, which is tributary to the Arkansas River.

We have a very efficient chart force at the Soil Conservation Service, but unfortunately they do not recognize the value of these maps as we do, and we were able to salvage the one on the East Fork Point Remove Creek watershed this morning just prior to its going in the incinerator, but we were not able to salvage the one on the West Fork Point Remove Creek watershed. Before you, you will notice a small map on the West Fork Point Remove Creek watershed. We are very sorry we do not have the two maps.

The West Fork Point Remove Creek watershed is located in Conway, Pope, and Van Buren Counties, Ark.

The East Fork Point Remove Creek watershed is located in Conway and Van Buren Counties, Ark.

Both projects are sponsored by the soil conservation districts involved. The East Fork Point Remove Creek watershed is sponsored by the Central Valleys Soil Conservation District and the Van Buren County Soil Conservation District. The West Fork Point Remove Creek watershed project is sponsored by the Central Valleys Soil Conservation District, Pope County Soil Conservation District, and the Van Buren County Soil Conservation District.

At the present time watershed improvement districts are being organized under the Arkansas State laws, and the improvement districts will have the responsibility for operating and maintaining the projects. The districts under Arkansas State law have substantial authority. They have authority for taxation, the right of condemnation, and other necessary authority for carrying out the project.

The East Fork Point Remove Creek has a watershed area of roughly 88,000 acres. The West Fork Point Remove Creek has a watershed area of about 200,000 acres, with roughly 33,000 acres of the West Fork Point Remove Creek watershed area being located within the Ozark National Forest.

The land use in the two watersheds is quite similar. It is about 20 percent cropland, about 30 percent grassland, the remainder being woodland in each watershed.

The structural measures in the East Fork Point Remove Creek watershed project will consist of 11 floodwater-retarding structures with a total capacity of 25,000 acre-feet, which will control runoff from 55 percent of the watershed.

In the West Fork Point Remove Creek watershed project there are 21 floodwater-retarding structures with an aggregate capacity of 58,000 acre-feet which will control the runoff from 56 percent of the watershed.

In the East Fork Point Remove Creek watershed project there are three structures that are larger than 4,000 acre-feet total capacity.

On the West Fork Point Remove Creek watershed there are five structures that are larger than 4,000 acre-feet total capacity.

In addition to the 21 floodwater-retarding structures in the West Fork Point Remove Creek watershed, there are about 4 miles of channel improvement together with land treatment measures and the necessary measures for protection of the national forest land. These measures reduce the frequency and extent of flooding on about 19,000 acres of flood plain.

In the East Fork Point Remove Creek watershed the average annual damage within the watershed will be reduced by approximately $24,000, which is a reduction of approximately 79 percent in damage to the agricultural lands in the flood plain.

In the West Fork Point Remove Creek watershed flood damages within the watershed will be reduced by about $112,000 annually, which represents about 64 percent of the floodwater damages to the agricultural lands in the flood plain.

In addition, in the East Fork Point Remove Creek watershed there will be approximately $30,000 annual benefits from the changed land use.

In the West Fork Point Remove Creek watershed there will be $35,000 average annual benefits from the changed land use.

The history of flooding in each of the watersheds has been that since 1927 up to 1946 in East Fork Point Remove Creek there have been 25 floods which have inundated more than 50 percent of the flood-plain land in the watershed. There have been 66 lesser floods which have inundated less than 50 percent of the flood-plain land in the watershed. The flood-plain acreage in the watershed is 6,100 acres.

In West Fork Point Remove Creek there have been 48 major floods in the 20-year evaluation period which have inundated more than 50 percent of the flood-plain land in the watershed, and there have been 65 minor floods in the same period. The major flood occurred in August 1959 in which a flood in excess of the 100-year frequency hit the West Fork Point Remove Creek watershed. The damages from that flood alone have been estimated in excess of $300,000.

As to the costs involved in the two projects:

In the East Fork Point Remove Creek watershed project, which is the smaller of the two projects, the total Federal cost for the construction of the structures plus the engineering and technical assistance is $1,407,000. The local people will put up $491,000 as their contribution to the project. The total cost will be $1,898,000.

On the West Fork Point Remove Creek watershed project the total Federal cost will be $2.95 or $3 million, which represents 75 percent, and the local people will put up $959,000, so the total project cost will be $3,911,000.

In addition to the installation cost the local people have guaranteed through their watershed improvement districts that they will operate and maintain all the structural measures at a cost of roughly $2,200 on the East Fork Point Remove Creek watershed project, and at a cost of roughly $5,100 annually on the West Fork Point Remove Creek watershed project.

The benefit-cost ratio on the East Fork Point Remove Creek watershed project is 1.3 to 1.

On the West Fork Point Remove Creek watershed project the benefit-cost ratio is 1.6 to 1.

I might close by pointing out that these are entirely agricultural projects. In other words, the floodwater damages have been suffered by the agricultural land in the flood plain. There are no urban flood damage areas within either watershed. However, there are a number of small towns and communities that are very heavily dependent upon the land in these two watersheds for their well-being and for their food supply.

I also point out that the agricultural pattern in land use in the watersheds is primarily one of livestock and soybeans.

I shall be glad to answer any questions.

Mr. Smith. Any questions on my right?

Mr. Davis. No questions.

Mr. Hull. No questions.

Mr. Smith. Any questions on my left?

Mr. Baldwin. No questions.

Mr. Schwengel. No questions.

Terrapin Creek Watershed, Alabama and Georgia

Mr. Smith. The next project we have for consideration this morning is the Terrapin Creek watershed in Alabama and Georgia.

In addition to the people from the Soil Conservation Service, we have here this morning Congressman Rains and Congressman Roberts of Alabama, who have expressed an interest in this project.

Mr. Rains, would you care to make a statement?

STATEMENT OF HON. ALBERT RAINS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ALABAMA

Mr. Rains. Mr. Chairman and members of the committee, certainly I do not have this full story in mind as the Soil Conservation Service witness does. I would only like to say that this is a watershed that develops first in counties in eastern Georgia, then it goes through Mr. Robert's district, then in mine.

As you will hear from the Soil Conservation Service witness, this is a large watershed to be called a creek, and as I look over this proposed plan and knowing the people who are in the soil conservation district, I have to say that I think this is an exceedingly fine piece of work. I happen to know that the percentage of agreements to participate was practically unanimous in a vast area.

I have nothing else to say except to say that I hope it will receive your favorable consideration, and that I think it is a very fine project.

Mr. Roberts has the other part of it, so I would like for him to make a statement.

I certainly want the record to show I was here and expressed my interest, because the people in my district are very much interested in this project, and since they are, I am.

Mr. Smith. Thank you, Mr. Rains.

Mr. Roberts, would you care to make a statement?

STATEMENT OF HON. KENNETH A. ROBERTS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ALABAMA

Mr. Roberts. Mr. Chairman and members of the subcommittee, I know that the Soil Conservation Service people will present the full picture of this project. I merely want to follow the trend of Mr. Rains' statement in saying to you there is a lot of local interest in this project. I am particularly interested in it because the center of the project is practically in my home town. Terrapin Creek is a creek I know quite well from boyhood days. I learned to swim in it and almost drowned in it.

This will be, I think, an outstanding project. It will make a fine contribution. It has a high benefit-cost ratio. I would like to join Mr. Rains in saying we thank you for permitting us to appear and will appreciate your favorable consideration of this project.

Mr. SMITH. Thank you, Mr. Roberts.

Who will make the presentation for the Soil Conservation Service?

STATEMENT OF CARL B. BROWN, ASSISTANT TO THE ASSISTANT ADMINISTRATOR FOR WATERSHEDS, SOIL CONSERVATION SERVICE

Mr. BROWN. Mr. Chairman, as has been pointed out, this is a comparatively large project. It is primarily in Alabama but it laps over into northwestern Georgia. The headwaters are in Georgia.

This project contains a watershed area of 183,675 acres in total. The project is cosponsored by the Terrapin Creek Watershed Conservancy District organized under the conservancy watershed laws of Alabama; by the Calhoun, Cleburne, and Cherokee Counties Soil Conservation Districts in Alabama; by the Cherokee County Board of Revenue; and by the county commisssioners of Cleburne and Calhoun Counties, Ala. In Georgia it is sponsored by the Coosa River and West Georgia Soil Conservation Districts.

All of the structural measures are in Alabama, so the interest in Georgia is confined to land treatment measures. This watershed area is largely wooded. It contains 13,360 acres of national forest land administered by the U.S. Forest Service. A very substantial part of the crop land and potential crop land is the land in the flood plain area subject to overflow, and that constitutes the principal economic base for agriculture in this area.

The plan of protection in this watershed consists of a very substantial amount of treatment and improvement on the upland areas, including tree planting and timber stand improvement and the usual soil conservation practices applied on crop land.

In addition, it proposes 10 floodwater-retarding structures as shown on this map. These 10 floodwater-retarding structures will control approximately 42 percent of the toatl area above the flood plain areas.

In addition to that, there will be a very significant amount of channel inprovement to open up and clean out the channels and improve their floodwater-carrying capacity. That in total will run about 92,000 linear feet of channel improvement.

This project will have a Federal cost just slightly higher than the average projects of this character. The total Federal cost will be $1,316,000, in round figures, of which $1,199,000 will be the Federal contribution to the cost of design and construction of the structural measures.

The total local cost involved in the project will be $947,000, in round figures. That ratio is 58 percent Federal cost and 42 percent non-Federal cost.

The great bulk of the non-Federal cost will be the required land treatment measures above the structures.

The benefits of this project will consist largely of damage reduction in the flood plain areas. This entire area is subject to to very frequent overflow and substantial reduction in its productivity as a

result. The average annual flood damage within the watershed in the area subject to overflow has been estimated at $173,500. It will be reduced to an estimated $61,700, or a reduction of 64 percent.

During the past 20 years there have been 80 floods in the area, showing that floods are extremely frequent. Of those 80 floods, with these structures in place 44 would have been eliminated entirely and the remainder would have been substantially reduced.

At the present time the average annual acres flooded is 11,755 acres, and the average annual acres flooded after the project will be 5,611 acres.

In addition to the reduction of losses on presently used crop land the project will permit flood plain landowners to restore 846 acres to previous levels of productivity, at an estimated benefit of $25,000, and will permit a more intensive land use of some land now used for pasture, resulting in a benefit of about $19,000 annually.

The benefit-cost ratio on this project is 1.8 to 1, with total monetary benefits estimated at $118,900 annually, compared with the estimated average annual cost of $65,563.

All needed lands, easements, and rights-of-way will be obtained by the Terrapin Creek Watershed Conservancy District. The local units of government will provide funds for this acquisition and will assist the conservancy district in the operation and maintenance of the project, at an estimated average annual operation and maintenance cost of $14,672.

This project comes before this committee because a number of these structures are of comparatively large size. Three out of the ten structures exceed 4,000 acre-feet in total capacity, that being the dividing line under Public Law 566 that requires projects to come before the Public Works Committee.

Thank you, Mr. Chairman.

Mr. SMITH. Thank you, Mr. Brown.

Any questions on my right?

Mr. DAVIS. No questions.

Mr. HULL. No questions.

Mr. SMITH. Any questions on my left?

Mr. BALDWIN. No questions.

Mr. SCHWENGEL. No questions.

Mr. SMITH. Thank you very much, Mr. Brown.

Mr. BROWN. Thank you.

BEAVER CREEK WATERSHED, KENTUCKY

Mr. SMITH. The fourth project we have for consideration this morning is the Beaver Creek watershed in Kentucky.

This project is in the district of Congressman Chelf, who could not be here this morning, but he has expressed to the committee his deep interest in the project and appreciation of favorable action.

Mr. BROWN. Mr. Chairman, this is a comparatively small project. This covers a watershed area of 33,858 acres in a rather intensively used agricultural section of Kentucky. It is located in south central Kentucky. Beaver Creek is a tributary of the Barren River in the Ohio River Basin. The area consists of 17,362 acres of cropland.

About 50 percent of the total watershed is in cropland. About 9 percent is in woodland and 12 percent in miscellaneous land.

This watershed is suffering very significant flood damages for a small area. In the area shown in green on the maps there is very valuable agricultural land. The damage reduction that would be obtained through this project would amount to $5,424 annually or 76 percent of the total estimated average annual flood damage. In addition, the project will permit flood plain landowners to utilize 342 acres more intensively with the upgrading of agricultural values at an estimated additional benefit of $5,572 annually.

The project is somewhat unusual in the sense that it contains only one floodwater retarding structure or reservoir. That is rather unusual for even a smaller project of this size. However, because of the topographic conditions in the watershed, this area [indicating on map] from the dam to the lower end is the principal area of flood plain damage. Because it is in the lower reaches, the engineering survey shows the most economic control is a single structure above the flood plain area.

In order to provide the necessary degree of control in that one structure, it is one of considerable size, exceeding the 4,000 acre-feet structure limitation, and therefore this project comes to the Congress and also comes before this committee.

The total Federal cost of the project is only $173,050, as against a local cost of $341,380. If it were not for the size of this one structure, under the provisions of the law this project could have been administratively approved.

Mr. SMITH. What is the size of the structure, Mr. Brown?

Mr. BROWN. The size of the structure is a total capacity of 4,278 acre-feet, and you will recall that under the provisions of the law if any structure exceeds 2,500 acre-feet it must come before the Congress.

Mr. SMITH. What will be the length of that structure behind it?

Mr. BROWN. This scale is 2 miles, Mr. Chairman, and that would represent almost 2 miles of length of lake to be involved there. The lower end would be a few hundred yards in width. I suppose the widest point would be close to one-half mile in width, the flood pool level.

Mr. SMITH. Any questions?

Mr. BALDWIN. I have one question.

Last year, as I recall, when you were here you testified that as of that time there were still funds in the budget currently or carried over from the preceding year so that projects approved last year could go into immediate construction. But, as I remember, last year you mentioned funds requested for the year in advance were not equivalent to the number of projects you estimated would be coming up and that you estimated there would be a backlog.

When we approve these projects, will there be funds in the budget to make it possible to start them or are we reaching a backlog?

Mr. BROWN. So far we have not had to backlog any project. We have been able to provide the funds at the time that local authorities are ready to come through with their commitments and easements and rights-of-way, and so forth.

I might make this observation, that the projects that are currently being approved are projects which for the most part will not require construction funds until the fiscal year 1962. So that the situation

on these projects would depend more largely on the budget as provided in 1962. We anticipate that funds will be available to provide the necessary technical assistance and engineering services to these projects and moving ahead with the designs, and so forth, as soon as they are approved.

Mr. BALDWIN. Thank you.

Mr. SMITH. Are there any further questions?

If not, thank you, Mr. Brown and Mr. Williams and Mr. Wetzel. That concludes the presentation this morning.

(Thereupon the public hearing on the above-entitled watershed projects was concluded.)

SMALL WATERSHED PROGRAM

THURSDAY, JUNE 2, 1960

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON WATERSHED DEVELOPMENT OF THE
COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The subcommittee met at 10 a.m. in room 1304, House Office Building, Hon. Frank E. Smith (subcommittee chairman) presiding.

Present: Representatives Smith (chairman), McFall, Cramer, Baldwin, and Schwengel.

Mr. SMITH. The Subcommittee on Watershed Development is in session—and I want to point out that by error this was called an executive session. That was in error. This is an open session. The subcommittee will meet in executive session later to consider the projects.

UPPER VERDIGRIS WATERSHED, KANSAS

Mr. SMITH. The first project for consideration this morning is the upper Verdigris watershed in Kansas, in which my colleague, Mr. Rees, is very much interested.

We will ask Mr. Rees to give us a statement about it if he cares to.

STATEMENT OF HON. EDWARD H. REES, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF KANSAS

Mr. REES. Mr. Chairman, my statment will be a rather brief one.

I appreciate the privilege of coming here and talking about this project briefly with you this morning. This project is not only in my congressional district, but is almost next door to where I live in Emporia, Kan.

The upper Verdigris watershed covers about 210,000 acres located in three counties out there. All of them, as I said a moment ago, are in my congressional district and near where I live.

The Department of Agriculture, of course, will explain the plan to you. The engineering studies that were made disclosed that a highly favorable ratio of benefits to cost could be achieved.

The Verdigris River, at its headwaters, flows and drops rather rapidly so that a considerable amount of otherwise good and valuable farm land is subjected to swiftly running floodwater following many rains that would not create a flooding situation in other watersheds or valleys.

The landowners and other patrons of the Upper Verdigris Watershed District have been active and interested in the creation of the district and in the adoption of the plan. There has been absolutely 100 percent cooperation. It is rather interesting that you can do

that sort of thing with a group of farmers who own land. It is my considered opinion that by reason of this keen interest, the district will proceed without delay to construct the improvements once the plan is approved.

It has always been my view that watershed plans and small reservoirs should be built whenever possible instead of huge and costly dams. I am in favor of reservoirs and so on too, but I do think more is accomplished in a watershed project.

What I want to do this morning is express my approval of this plan and urge its approval by this committee before the close of the session. The other body has already approved the proposal.

I think Mr. Brown of the Department of Agriculture will give you the details of the plan.

Mr. SMITH. Thank you, Mr. Rees.

Any questions?

Mr. BALDWIN. I have no questions.

Mr. SMITH. Mr. Carl Brown of the Soil Conservation Service will present the testimony of the Department on the plan.

STATEMENT OF CARL B. BROWN, SOIL CONSERVATION SERVICE, DEPARTMENT OF AGRICULTURE—Resumed

Mr. BROWN. Mr. Chairman, this [indicating on map] is the upper Verdigris watershed, the headwaters of the Verdigris River.

This watershed is located above Toronto Reservoir recently constructed by the Corps of Engineers, which has been before this committee in prior years for consideration.

The upper end of the floodwater pool of the Toronto Reservoir is about 10 miles below this watershed.

This watershed is justified on the floodwater benefits within the watershed and there has been no evaluation made in dollar terms of the beneficial effects on the Verdigris River flood plain below the limits of the project area. The project will reduce the rate of sedimentation in the Toronto Reservoir as well as provide for an improved and more stable economy in the watershed. However, the justification for this project is the prevention and reduction of very frequent flooding in the flood plain area shown in color on this map.

This project is mainly in three counties and parts of two others in the Arkansas River Basin. It is jointly sponsored by four soil Conservation districts in four of the five counties that have significant areas in there, and by the Upper Verdigris Watershed District.

The Upper Verdigris Watershed District is a local organization organized under State law which has the power of taxation and the power of eminent domain. That organization assumes responsibility for acquiring needed land, easements, and rights-of-way and for maintaining the structures out of tax revenues.

The watershed area, as Congressman Rees pointed out, is approximately 210,000 acres altogether and of that amount the flood plain area subject to damaging floods amounts to 19,564 acres. That will be the area directly benefited.

This watershed is somewhat unusual. It is in that part of Kansas where grass and livestock is a principal industry. Only 18 percent of the area at the present time is in crop production. There will be a further reduction in crop production as a result of this project. It is estimated it will come down to 15 percent.

At the present time the grassland area in the watershed is 79 percent and it is estimated it will rise to 80 percent.

There will be a slight increase from 3 percent to 4 percent in land use for roads and so on.

The land is approximately 100 percent in private ownership except a small amount of school land.

The watershed contains 1,277 farms ranging in size from 80 acres to 5,000 acres, with an average of 335 acres per farm. The relatively large farm size is due to the fact it is a grass economy livestock area.

The watershed project includes the usual land treatment measures to protect and improve the soil and water resources, such as crop rotation, pasture seeding, farm ponds, and so on, in addition to the structural measures consisting of 42 floodwater-retarding structures. These 42 floodwater-retarding structures, with an aggregate capacity of 39,529 acre-feet, will control the runoff from 60 percent of the watershed. This will give a relatively high level of control to an agricultural watershed. Most of this area is flooded more frequently than once a year at the present time and the project will reduce it so that the average flooding after the project is installed will not be more often than once in 5 years.

The total flood damages in the watershed at the present time are estimated to be $386,000, in round figures, annually, of which the crop and pasture damage amounts to $247,000 or about two-thirds.

There is one town which is suffering damages. That is the town of Madison, which suffers an annual damage of $9,333.

The total damage reduction provided by the project will amount to 69 percent producing annual benefits of $273,000 in round figures. However, the town of Madison will have a greater degree of protection. The damages in the town of Madison it is estimated will be reduced by 89 percent. Madison is a small town of about 1,150 people.

The total cost of this project is $5,043,051. The Federal cost of the project will be $4,385,483, or 87 percent, and the local cost will be $657,568 or 13 percent.

The benefit-cost ratio is estimated to be 1.5 to 1.

The project is scheduled for installation over a period of 8 years. It is estimated that the annual maintenance cost on the project to the local watershed district on the structures after their completion will amount to $17,300, which will be provided out of tax revenues.

I will be glad to answer any questions, Mr. Chairman.

Mr. SMITH. Mr. McFall?

Mr. MCFALL. No questions.

Mr. SMITH. Mr. Baldwin?

Mr. BALDWIN. No questions.

Mr. SMITH. Thank you very much, Mr. Brown, and thank you, Mr. Rees.

Mr. REES. Thank you, Mr. Chairman. I appreciate the courtesy of the committee.

Mr. BALDWIN. I want to congratulate Mr. Rees on his diligence in representing the people of his district. I know he will retire this year and I think it is commendable that despite that fact he is continuing to give his full attention to the people of his district.

Mr. REES. Thank you.

REELFOOT-INDIAN CREEK WATERSHED, TENNESSEE AND KENTUCKY

Mr. SMITH. The next project we will consider this morning is the Reelfoot-Indian Creek watershed in Tennessee and Kentucky.

Our colleague, Mr. Everett, has been especially diligent in prosecuting the completion of this study and asking that it be promptly considered by this committee.

Mr. Everett, we will be glad to hear from you at this time.

STATEMENT OF HON. ROBERT A. EVERETT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE

Mr. EVERETT. Thank you, Mr. Chairman and members of the committee.

You know they say the most important road in the world is the road by your house. This project is in my county, Obion County, which is one of the largest counties in my congressional district. Incidentally, our farm is right here [indicating on map].

This project is a project that has long been needed in northwest Tennessee and in Kentucky. Reelfoot Lake, which is 7 miles wide and 30 miles long, was formed by an earthquake in 1811 and 1812. This Lake has been filling up with silt from floods that occur along the Reelfoot and Indian Creeks. We are told that within 30 or 40 years if this project is not completed Reelfoot Lake will be a marsh.

Reelfoot Lake is well known for its fishing and hunting and is a great recreational area for those that pursue those hobbies.

As you will notice on the map, there are several retention dams here. We have had a lot of conflicting viewpoints between the U.S. Corps of Engineers, the Soil Conservation Service, the Fish and Wildlife Service, the Tennessee Game and Fish Commission, local farmers and others. Last year, on October 27, we had a meeting right there and had everybody there from the Governor-elect to the constable of that local district and we had a meeting of minds as to what should be done. The watershed work plan now before this committee has the support of all interested Federal and State agencies. It has the support of the Tennessee Game and Fish Commission and the soil conservation districts not only in Tennessee but in Kentucky. Some of these retention dams are in Kentucky.

I know we cannot put these in the record, but I do want to show you some pictures here from the Union City Daily Messenger, my hometown paper, where they had a severe flood and hundreds of acres of corn and cotton were submerged by water and ruined. I want to file that as a part of my statement.

I would like to file a statement of our colleague, Congressman Frank A. Stubblefield, who represents Fulton County, Ky.

Mr. SMITH. Without objection it is so ordered.

(The statement above referred to follows:)

STATEMENT BY CONGRESSMAN FRANK A. STUBBLEFIELD

Mr. Chairman, I am pleased to appear before your committee this morning in support of the watershed work plan for the Reelfoot-Indian Creek watershed. As you know, about 90 percent of this watershed lies in the district which Mr. Everett so ably represents. The remaining 10 percent is in Fulton County, Ky., in the district I represent.

I think Congressman Everett and the Federal, State, and local agencies and groups who have developed this sound, workable program to meet this longstanding need are to be commended.

Mr. Chairman, on behalf of Kentucky's 10 percent I want to express our 100-percent support and to say that we hope the committee will act favorably upon this project.

Mr. SMITH. Any questions, Mr. McFall?

Mr. MCFALL. No questions.

Mr. SMITH. Mr. Baldwin?

Mr. BALDWIN. No questions.

Mr. SMITH. I appreciate your giving us this background about your efforts in helping to push this study along, because we on this subcommittee are especially interested in the watershed programs being utilized as a means of coordinating the Federal, State, and local agencies. What you have done in bringing these agencies together and agreeing on a plan is beyond the normal operations and duties, you might say, of a Congressman, and I think is indicative of what a lot of us should do in bringing about better results.

Mr. EVERETT. Thank you, Mr. Chairman.

Mr. SMITH. We will now hear from Mr. Carl Brown, who will present the testimony of the Department.

Mr. BROWN. Mr. Chairman, the Reelfoot-Indian Creek watershed project is located in Obion County, Tenn., and Fulton County, Ky. All the works of improvement other than the land treatment will be in Tennessee.

This [indicating on map] is a direct tributary to the lower Mississippi flowing into Reelfoot Lake.

The project is sponsored by the Reelfoot-Indian Creek Watershed District, the Obion and Fulton Counties Soil Conservation Districts, the Tennessee Game and Fish Commission, and the State of Tennessee itself, that is, the State government.

The purpose of the project as evaluated in dollar terms is flood prevention on the land shown in green in the flood plain area. However, as Mr. Everett has pointed out, one of the principal benefits that will come is the intangible benefit of protection of Reelfoot Lake from sedimentation from the Indian Creek portion of the watershed. Reelfoot Lake is one of the most noted fishing areas, I believe, in the Midwest. In the work plan the point has been made that one of the problems of that lake has been how to stop the steady flow of sediment which is slowly but surely destroying one of the most important wildlife habitats and recreational areas in the country. This area had 219,705 visitors from July to November 1959, ranking second among the many Tennessee State parks. I think that gives some measure of the significance of that feature of the project.

The Reelfoot-Indian Creek watershed includes a total area of 82,660 acres, of which 74,853 acres are in Tennessee and 7,807 acres in Kentucky. The flood plain area which is directly benefited by the program amounts to 8,847 acres shown in green.

This area has present cropland use of 43 percent. It is estimated that it will increase to about 46 percent as a result of the opportunities for bringing some currently wasteland into production as a result of the improvements.

The grassland area in the watershed will also be increased from the present 12 percent to an estimated 16 percent.

The woodland area will be maintained at about 26 percent; and the miscellaneous use land will be decreased from 19 to 12 percent.

This watershed is likewise almost wholly in private ownership. It contains 692 farms having an average size of 125 acres.

The measures provided in this program are basically of three types. One is the watershed land treatment measures including the usual conservation practices to be carried out by the farmers. In addition, however, there are a certain number of land treatment measures for flood prevention in which there will be a sharing of costs with local people and with the State agencies, the Federal cost coming from appropriations made for the watershed program.

The structural measures consist of 14 floodwater-retarding structures, 1 major desilting basin, which is down here [indicating], and in addition there will be 188,000 linear feet of stream channel improvement in the flood plain area. That is shown by lines down through the flood plains which will permit the opening up of that area to carry the floodflows.

With the projects installed flooding will be less frequent than once in 3 years on 80 percent of the lower reaches of the watershed and on 97 percent of the upper reaches. It will be less frequent than once every 5 years on 65 percent of the area below the retarding structures. This compares with a flooding in excess of once a year at the present time.

The evaluated annual damages in this watershed amount to $300,000, of which $206,000 are crop and pasture damages.

There is no urban area in the watershed. Most of the remaining damages are to agricultural property, houses, roads and bridges, and so forth.

The total damage reduction will be 73 percent and in addition to that there will be benefits accruing from changed land use or intensification of land use, so that the total benefits from the project will amount to an estimated $276,000 annually.

Mr. BALDWIN. In estimating benefits, you said one benefit would be the prevention of further sedimentation of this lake. I am curious as to what means you have of estimating benefits from that phase of the project?

Mr. BROWN. There is no good measure of benefits when the benefits are in fact intangible benefits of the sort involved in the recreational use of the lake. If you have, for example, a power reservoir that is going to be filled at a certain rate with sediment and you have a certain amount of dollar return, you can measure the net loss in return from the power. But no one has come up with a satisfactory formula that I know of for measuring the value to the 200,000 people who go out there and fish every year.

Mr. MCFALL. I think you said 200,000 people went to that area in a 5-month period?

Mr. BROWN. 219,705 visitors were in that area in the 5 months from July through November 1959, so I assume the annual total is considerably larger than that.

Mr. MCFALL. If you figure recreational benefits at 10 cents or $1 a head, you have a sizable amount.

Mr. BROWN. It is obvious there is a sizable value there. We have not attempted to put any dollar figure on it because apparently no one can agree on what such values actually amount to. And it has not been necessary to put a dollar figure on it from the standpoint of justifying the project. The project was justified on the dollars of flood-reduction benefits that can be determined.

I might say the benefit-cost ratio for the direct benefits is 2.6 to 1, so it has a quite favorable ratio without considering the intangible value.

The total cost of this project will be $2,822,276, of which the Federal cost will be $1,773,365 or 63 percent. In this case the local contribution of $1,048,911, amounting to 37 percent of the total project cost, is likewise unusually high. That is primarily as a result of the fact that the appraised value of the land easements and rights-of-way and the cost of administering the contracts will amount to $824,000 or about 35 percent of the cost of the structual measures.

This project is projected for installation over a period of 5 years. It is estimated the annual cost to the watershed district and to the Tennessee Game and Fish Commission and the State of Tennessee, which will assume part of that responsibility, of operation and maintenance for all structural measures is $8,392.

I believe that is a general summary, Mr. Chairman. I will be glad to answer any questions.

Mr. SMITH. The economic benefit-cost ratio of this project is considerably more than on the previous project, the upper Verdigris watershed project?

Mr. BROWN. Yes, sir.

Mr. SMITH. And there are probably greater intangible benefits, from the summary we have here, yet I notice a far greater percentage of Federal contribution on the prevoius project. What is the difference?

Mr. BROWN. The reason for that, Mr. Chairman, is the specification in the act itself that the local organization must bear the cost of easements and rights-of-way and the Federal Government must bear the construction cost for flood prevention. Therefore, you can have a project where the Federal Government costs are higher, and other projects where the local costs are higher.

Mr. BALDWIN. On that point, do I understand in some cases individual property owners might even donate easements?

Mr. BROWN. That is right.

Mr. BALDWIN. So that the local contribution is not as great?

Mr. BROWN. We make an objective appraisal of the value of the land. That does not mean the local district would have to raise and pay out of tax revenues the amount I mentioned of $824,000. It may be a part of that land will be donated without requiring any cash payments. This merely relates the value of what the local organization is responsible for toward the cost of the project.

Mr. CRAMER. In your experience, what portion of the land is customarily donated?

Is there an effort to have the land donated rather than condemned?

Mr. BROWN. That varies greatly by projects and it is entirely a matter of the decision of the local organization that has that responsibility. Some local organizations have attempted to get practically all the land donated. Other local organizations have felt that the right and fair thing to do is to have land appraisers appraise all the land and to set a payment schedule and pay for all the land. Then you have variations in between.

Because these are local projects it has been our position that the Federal Government should not attempt to say how they shall get the land so long as they fulfill that responsibility.

Mr. SMITH. Any further questions?

Thank you, Mr. Brown, and thank you, Mr. Everett.

Mr. EVERETT. Thank you.

OLMITOS AND GARCIAS CREEKS, TEX.

Mr. SMITH. The third project we have today is the Olmitos and Garcias Creeks watershed in Starr County, Texas. It is in the district of our colleague, Mr. Kilgore.

Mr. Kilgore has submitted a statement and without objection it will be made a part of the record at this point. Mr. Kilgore is unable to be here because he has a dental appointment.

(The statement above referred to follows:)

STATEMENT BY JOE M. KILGORE, MEMBER OF CONGRESS

Mr. Chairman, adequate watershed protection and flood prevention measures are badly needed on the Olmitos and Garcias Creeks watershed in Starr County, which is located in the district I represent, the 15th Texas District.

This is an important agricultural area. Severe crop damage results from frequent flooding in the watershed. During the 35-year period from 1923 to 1957, there were 12 major floods as well as 52 minor floods. Since a year-round cropping pattern exists in the irrigated section of the watershed, all 64 of the floods caused great crop damage. Total direct floodwater damages were estimated during the 1923–57 period at an average of $34,571 annually, with indirect damages averaging an estimated $7,053 per year.

The Olmitos and Garcias Creeks watershed has a drainage area of 99,840 acres. It heads about 20 miles northeast of Rio Grande City and flows into the Rio Grande. Most of the annual flood damage occurs when the floodwaters of the creeks enter a series of old river channels and flow parellel to the principal channel to the Rio Grande.

The Starr County Soil Conservation District and the Starr County commissioners court, with the assistance of the Soil Conservation Service, have recently completed a work plan for watershed protection and flood prevention in the watershed under Public Law 566.

This work plan proposes the installation, over a period of 5 years, of a project for the protection and development of the watershed at a total estimated cost of $2,263,855. The share of this cost to be borne by Public Law 566 funds is $995,664.

The ratio of the average annual benefits to the average annual cost of structural measures is 1.3 to 1.

This is the first watershed project for my district. Because of this fact, I have possibly overlooked providing you with some information which the committee would desire. Should this be so, please be assured that the Starr County people and I will be honored to provide your committee with any additional information you might wish. I have already sent to the committee brief statements from Starr County Judge M. J. Rodriguez and Soil Conservation District Chairman John Shuford expressing the support and interest of their respective jurisdictions in this project. These gentlemen would have been here today had there been any requirement for their presence. They join with me in assuring the committee of our interest in this worthy and badly needed project.

Mr. SMITH. Mr. Brown, will you present the testimony of the Department?

Mr. BROWN. This is the Olmitos and Garcias Creeks watershed in Starr County, Tex.

This watershed is a direct tributary of the Rio Grande.

This is a project consisting of a large area of semiarid brushland causing a great deal of damage to an area of irrigated and highly fertile and highly productive land along the Rio Grande.

This project is sponsored by the Starr County Soil Conservation District and the Commissioners Court of Starr County, the local legal governing body of the county.

The Commissioners Court of Starr County will be responsible for obtaining the easements and rights-of-way and will provide funds for the operation and maintenance of the structural measures.

This project is for flood prevention on the irrigated lands.

The total watershed area is 99,840 acres. The acreage shown as subject to damage amounts to 1,666 acres. The cropland in the project as a whole is only 7 percent of the area, and that is largely confined to the flood plain, which is 71 percent in crops and 22 percent in grass and seed grains at the present time.

This area is entirely in private ownership. The average size of landholdings for the watershed as a whole is about 600 acres, but that is mostly range country. The irrigated area contains a number of units as small as 20 acres.

The land treatment measures will consist of those types of measures applicable to this type of watershed on the relatively small areas of irrigated lands and range management practices which are applicable on the rangelands.

There will be seven floodwater-retarding structures to retard the runoff from 87 percent of the watershed, plus 9.2 miles of channel improvement in the lower end of the watershed which will permit the water retarded by these structures, 20,210 acre-feet, to get out to the Rio Grande without causing overflow.

The annual damages on this project area are slightly in excess of $42,000 at the present time. The benefits will consist of almost full reduction of the existing damages, about 98 percent of the existing crop and pasture damages will be eliminated by this project, and in addition it will permit the more intensive use of some of that land which is currently not being used because it is subject to such frequent flood hazards from this watershed.

The more intensive use of land in this watershed will produce an estimated $15,000 annual benefit out of a total benefit of about $57,000 or slightly more than one-fourth of the projected benefits will come from the intensification of land use.

This project will have a total cost of $2,264,000, of which the Federal cost will be $996,000 and the local cost will be $1,268,000.

I should point out in this connection, however, that there is a very large projected land treatment program in this watershed and that the local cost for land treatment constitutes the major part of the non-Federal cost. If we consider just the structural measures alone, the total cost of the structural measures plus channel improvement is $1,052,780, of which the Federal cost is $979,000, or 93 percent, whereas the local cost is $73,000 or 7 percent.

I take that to mean, Mr. Baldwin, that in this area, being largely rangeland, the values associated with the easements are quite small and that is the reason the ratio of Federal to non-Federal cost seems high.

The benefit-cost ratio of this project is 1.3 to 1.

The scheduled installation period is 5 years.

The estimated annual cost of operation and maintenance of the structural measures is $4,235, which will be assumed by the Starr County commissioners court.

I believe that is all I have, Mr. Chairman.

Mr. SMITH. Mr. McFall.

Mr. MCFALL. Mr. Brown, how large are these structures?

Mr. BROWN. These seven floodwater-retarding structures have a total capacity of 20,210 acre-feet. The largest structure has a flood detention capacity of 4,982 acre-feet, which is just under the 5,000-acre-foot limit for floodwater-retarding structures.

Mr. MCFALL. This is in an area where they probably can use water of this type for irrigation in the summer months, is that not right?

Mr. BROWN. It so happens that this area is supplied with irrigation water from existing projects operated by the International Boundary Commission.

This project receives its water out of the Rio Grande plus some in the flood plain itself which gets underground flow from the Rio Grande, so it was not felt there was a need for additional water for irrigation.

Mr. MCFALL. Could any these structures be used for water conservation?

Mr. BROWN. Of course all of the water in these structures will be returned to the Rio Grande anyway.

Mr. MCFALL. It will come back slowly?

Mr. BROWN. That is right, it will come back at a reduced rate and probably there will be some additional recharge into the streambed as well because of this reduction in rate of flow.

Mr. SMITH. Would it be possible for any of the adjacent landowners to take water out of these structures?

Mr. BROWN. It would be possible to utilize some of this water in the sediment pool area during the early part of the project before the pools are filled up if there are some lands that might be irrigated. I assume they would run into a water right situation, however.

Mr. SMITH. I wonder if that would be possible.

Mr. BROWN. It would be physically possible. I do not know if it would be legally possible or not.

Mr. SMITH. Any further questions?

Mr. CRAMER. How many farms are there in this project area?

Mr. BROWN. I am not sure I have that.

Mr. CRAMER. You indicated they were mostly large landowners?

Mr. BROWN. I noted that the average holding in the watershed area as a whole is about 600 acres, but the area down in here [indicating] has holdings that are as small as 20 acres and the total benefited area is 1,666 acres, so I would assume that there are probably a score or more landowners in this area.

Mr. CRAMER. What is the name of the State agency in Texas that approves these projects?

Mr. BROWN. The State soil conservation board has approval authority so far as the work plans are concerned. As to the engineering plans, when they get in construction, we consult with the Texas Board of Water Engineers.

Mr. CRAMER. Who determines the priority?

Mr. BROWN. The State soil conservation board recommends the priority to the Soil Conservation Service.

Mr. CRAMER. Who determines the number of projects to be requested for approval by your agency?

Mr. BROWN. That is based on the amount of funds that are available for planning in the State, and that includes both Federal and State funds.

Incidentally, I believe I am right in saying in this case the local organization itself made funds available for the planning of this project, which was not planned with Federal funds. It was planned by Federal employees but with funds made available by the commissioners court of Starr County in the amount of $52,000 for the development of this plan.

Mr. CRAMER. I have three projects in my district that have been sitting on dead center for 6 years and every time I inquire about them I am told it is a matter of priority. Some projects seem to move very slowly.

Mr. BROWN. I do not know about that particular situation, but I do know that in the State of Texas the number of applications not yet serviced—that is, for which no planning assistance has been provided—there probably is a workload that would run for more than 5 years at the present rate of flow in Texas.

Mr. BALDWIN. In California the ones that move fast are where the local people put up the money and the plans.

Mr. BROWN. That is true, and I know in Texas the State Soil Conservation Board will give priority to a project which the local people will put up the planning money.

Mr. SCHWENGEL. The same is true in Iowa.

Mr. CRAMER. What is the budget request for this year?

Mr. BROWN. The budget request was $27,750,000 for the "Watershed protection" item, which includes both planning and construction. The House committee recommended and the House passed the appropriation bill with the amount raised to $32 million, and in the Senate an additional $5 million was added on the floor of the Senate, so this is in conference now with a figure of $32 million from the House and $37 million from the Senate.

Mr. CRAMER. At the present rate, how long will it take to catch up with authorized projects?

Mr. BROWN. Are we talking about planning?

Mr. CRAMER. No, construction.

Mr. BROWN. In the construction phase we would be short of funds that might be obligated in the forthcoming fiscal year if the amount as passed by the Senate was accepted. With $37 million we still would be somewhat short of funds which might be obligated in the forthcoming fiscal year.

Mr. CRAMER. What is the total amount of authorized Federal projects?

Mr. BROWN. The total amount at the present time—and this is an approximation because every time we get a new group of projects approved it changes—is in the neighborhood of $179 million of total authorizations at the present time.

Mr. BALDWIN. If I understand it correctly, though, some of these projects are planned to be constructed over a period of years. Is it not correct that the funds that are in the budget this year will mean that even the authorized projects as late as last year will have funds to get underway?

Mr. BROWN. That is correct. In the first year of a project, taking these we are now considering, the obligation will be confined ordinarily simply to the development of the detailed designs for the structures, requirement of the easements, and so forth. We seldom have projects that move into construction in less than 12 months

from the time they are authorized by the committee. Usually in the first year of a project—these larger projects—not more than $50,000 would be required. We anticipate that the next year's budget will be sufficient to provide for that initial step of providing technical assistance and engineering services to all of the projects authorized.

Mr. CRAMER. How about planning?

Mr. BROWN. The planning fund also is in conference in that the budget recommended a reduction in planning funds from the current year's level of $4.9 million to $3.5 million.

The House restored it to $4.9 million. The Senate accepted the budget version of $3.5 million, so conference now has to make a decision on the level of planning.

Mr. CRAMER. How about backlog of projects?

Mr. BROWN. The backlog of projects not yet planned is continuing to increase. We have just passed, within the last week, 1,300 State-approved applications received in Washington for assistance.

We have provided planning assistance now for 549 of these watersheds.

At the end of the last fiscal year about 61 percent of the applications had not been serviced, that is, we had not provided any assistance.

At the end of this fiscal year we estimate about 64 percent of the total number will not have been provided with assistance.

Mr. CRAMER. Those are just projects for which the States have asked planning money and does not include the backlog of those projects for which they realize planning money would not be available. Is that right?

Mr. BROWN. I am talking about the total number of applications that we have had from local organizations approved by the State agency.

Mr. CRAMER. There is a substantial backlog in addition to that which the States have not approved. Is that right?

Mr. BROWN. There are always quite a number of applications that are in the process of being formulated by local organizations that are in the hands of the State agencies that have not been approved yet, as you say. There are probably several hundred applications in some stage that have not yet received State approval and been received in Washington.

Mr. CRAMER. That is all.

Mr. SCHWENGEL. In your statement you said there were many lands that could not be used because of the recurring of floods. Do you know about how many acres that amounted to, the percentage of the total?

Mr. BROWN. I do not have it in terms of acres here. I have it in terms of dollar benefits. It would not be a relatively high proportion of the total of 1,600 acres. It might be 200 or 300 acres out of the 1,600. Judging from the dollar benefits it would not be a high proportion of the total.

Mr. SCHWENGEL. You say when these are built they will be brought into intensive use. What kind of use?

Mr. BROWN. They are parts of the same farm units on which land now is being cultivated but they are odd pieces where because of the overflow being so frequent or the drainage being so poor those particular pieces of fields or small fields cannot be cultivated.

Mr. SCHWENGEL. What kinds of crops will they grow? Will they cause more of a surplus?

Mr. BROWN. Their principal crops in this area are cotton and truck crops.

Mr. SMITH. On those small-acreage items it is unlikely they will grow cotton.

Mr. BROWN. I am not sure. I suspect this is perhaps long-staple cotton they are growing here.

Mr. SMITH. I doubt if they will do much cotton growing with 20 acres. That is very unlikely. It would more likely be truck crops.

Any other questions?

(No response.)

Mr. SMITH. Thank you very much, Mr. Brown.

That concludes the testimony on these projects. We are ready to entertain a motion.

Mr. CRAMER. I move that the three projects be favorably reported to the full committee.

Mr. MCFALL. I second the motion.

Mr. SMITH. It has been moved and seconded that the three projects be approved and reported favorably to the full committee.

Without objection it is so ordered.

(Thereupon the hearing was concluded.)

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SMALL WATERSHED PROGRAM

WEDNESDAY, JUNE 29, 1960

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON WATERSHED DEVELOPMENT
OF THE COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The subcommittee met, pursuant to call, at 10 a.m., room 1304, New House Office Building, Hon. Frank E. Smith (chairman) presiding.

Mr. SMITH. The subcommittee will come to order.

The first project we are going to consider this morning is the Big Prairie and French Creeks watershed, Alabama.

BIG PRAIRIE AND FRENCH CREEKS WATERSHED, ALABAMA

Our colleague, Mr. Selden, who has been in contact with me about this project is here, and we will call on him now.

STATEMENT OF HON. ARMISTEAD I. SELDEN, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ALABAMA

Mr. SELDEN. Mr. Chairman and members of the committee, I want to express my appreciation to you for giving me an opportunity to appear here this morning in support of the Big Prairie-French Creek watershed. As you know, this watershed encompasses a total of 180,192 acres in Hale, Perry, and Marengo Counties in the State of Alabama. Hale and Perry Counties are located in the Sixth Congressional District that I have the privilege of representing in Congress, and the latter county—Marengo County—is in the district of my distinguished colleague, the Honorable Frank W. Boykin. Due to another commitment, Mr. Boykin is unable to be with us this morning. However, he has asked that I also convey to you his vital interest in this important project, and he joins me in respectfully requesting your approval of the Big Prairie-French Creek watershed.

Application for Federal assistance for this watershed was first initiated 2 years ago. Authorization to provide planning assistance to the sponsoring local organizations for the watershed was granted on October 3, 1958, under authority of the Watershed Protection and Flood Prevention Act of the 83d Congress (Public Law 566, 83d Cong.) Local interests have been working diligently in behalf of the Big Prairie-French Creek watershed and, as you know, the watershed has met all the prerequisites required by law. It is sponsored by two local organizations—the Black Belt Soil Conservation District and the Big Prairie-French Creek Conservancy District—and it has been fully approved by the State soil conservation committee.

Mr. Chairman, the two major problems in this watershed area are floodwater damages to pastures, crops, roads, and bridges and the erosion of upland soils. The purpose of the plan now under consideration is to reduce the frequency and magnitude of flood damage and reduce erosion. This will be done by land treatment for watershed protection and for flood prevention and also by the installation of 21 floodwater-retarding structures and 203,200 linear feet of channel improvement. The planned works of improvement will effect a 67-percent reduction in areas flooded annually.

The improvements contemplated by the creation of this watershed district are urgently needed in the affected areas, and it is understandable that the residents of the counties involved are most anxious for the proposed measures to be undertaken at the earliest possible date. It is my hope, therefore, that the committee will act promptly and favorably on this important watershed project.

Mr. SMITH. Thank you, Mr. Selden.

Do you have any questions?

Mr. MCFALL. No questions.

Mr. SELDEN. Thank you very much.

Mr. SMITH. Mr. Brown, are you going to testify on the project?

Mr. BROWN. Mr. Wetzel will give our report on this project.

STATEMENT OF JOHN H. WETZEL, DIRECTOR, WATERSHED PLANNING DIVISION—Resumed

Mr. WETZEL. Mr. Chairman, after the Congressman's very fine presentation of the facts on the project, I will touch on a few additional details.

As the Congressman said, this watershed is located in Hale, Prairie, and Marengo Counties. It is adjacent to the city of Greensborough, which lies at this point [indicating].

The watershed area is roughly 180,000 acres and the two streams, Big Prairie and French Creek, are tributary to the Black Warrior River at this point [indicating] which , in turn, is a tributary to the Tombigbee River.

The original sponsors of the application were the Black Belt Soil Conservation District during the time that the plan was being prepared and developed and the local people organized under the State law the Big Prairie and French Creek Watershed Conservancy District which has legal authority to carry out the project and raise the necessary funds for the project. The history of flooding in the watershed has been that seven or eight times a year about 50 percent of the flood plain land in the watershed is subject to overflow.

Channels are very badly deteriorated due to the sediment that has been deposited in the channels from the upland areas.

While the flood plain area is a little better than 20,000 acres, almost half of that flood plain area, or 10,000 acres, is now suitable for no farming whatsoever. A great deal of it has grown up into brush and weeds. It is some of the finest land in the entire watershed that has developed in that way.

The principal enterprises in the watershed are raising beef cattle and dairy cattle. The land use in the watershed is 14 percent for crops, 67 percent grassland, 18 percent woods, and 1 percent in miscellaneous.

The entire watershed, all of the lands, are in private ownership. There are 605 farms in the watershed that average about 300 acres each. The 21 floodwater-retarding structures shown on the map have a total capacity of 33,000 acre-feet, and the largest structure is slightly under 5,000 acre-feet, 4,667 acre-feet.

The benefits that will accrue as a result of the project amount to $179,000 annually. The costs involved in Federal funds are $2,403,000, which is 48 percent of the total project cost. The local people will put up $2,603,000, or 52 percent of the total project cost. The local people will provide about $175,000 worth of land easements and rights-of-way and, of course, will administer the contracts at a cost of roughly $9,000. The benefit-cost ratio is 1.14 to 1.

The watershed conservancy district has guaranteed that they will operate and maintain the structural measures at a cost annually of $28,326.

Just below the mouth of the Big Prairie and French Creeks is located the Crops of Engineers Demopolis Dam which backs water into the lower reaches of each of the streams. The sediment control that will be provided by the structural measures and the land treatment measures on the watershed lands will have an appreciable effect on the sediment rate in the Corps' Demopolis Dam.

Mr. SMITH. Thank you very much, Mr. Wetzel.

Are there any questions?

Mr. MCFALL. How do you calculate the annual cost of $119,000?

Mr. WETZEL. The annual costs are calculated on a basis of discounting the total cost over a period of 50 years, which is the life of the project.

Mr. MCFALL. Fifty divided into approximately $5 million?

Mr. WETZEL. It is amortized at 2.5 percent of the total Federal cost. It is amortized at 2.5 percent.

Mr. MCFALL. Thank you.

Mr. SMITH. Thank you very much, Mr. Wetzel.

WATERSHED WORK PLAN, MILL RUN WATERSHED

The next item listed is Mill Run Watershed in Crawford County, Pa. The statement for this apparently has not arrived.

Mr. MCFALL. Could we put that over until Mr. Kearns' statement arrives?

Mr. SMITH. All right.

TOWN FORK CREEK WATERSHED, NORTH CAROLINA

Mr. SMITH. Let us now take up Mr. Scott's statement in behalf of the project in North Carolina.

Without objection, I will put in Mr. Scott's letter in the record at this point.

(The letter follows:)

TOWN FORK CREEK WATERSHED, STOKES AND FORSYTH COUNTIES, N.C.

Mr. Chairman and members of the committee, my name is Ralph J. Scott, Member of Congress, representing the Fifth District of North Carolina.

The proposed Town Fork Creek watershed project is located in my district and I am very much interested in seeing it approved and completed.

The Town Fork Creek watershed, consisting of 84,521 acres, is located approximately 5 miles south of Danbury and 9 miles north of Winston-Salem along the Stokes-Forsyth County line in the north-central section of North Carolina. It is a tributary of the Dan River, which flows into the Roanoke River.

The watershed protection and flood prevention project is sponsored jointly by the Dan River Soil Conservation District, the Tri-Creek Soil Conservation District, and the Stokes County Commissioners.

Objectives of the watershed sponsoring local organizations are: (1) To provide the maximum feasible protection from erosion to the upland, (2) to protect the flood plain from floodwater and sediment damages to the extent that it can be used for crops and pasture, (3) to relieve the upland of part of the burden of crop production by utilization of the flood plain, and (4) to protect the flood plain area from floodwater damages between Germanton and Walnut Cove so that this area can be used for industrial development.

The relatively steep slope along the perimeter of the watershed and severely eroded land throughout the watershed produce high storm runoff which results in frequent flooding of the fertile flood plain land along the main stream and principal tributaries. The major portion of the flood plain land along the main stream lies below Germanton. Flooding occurs on some portion of this land on an average of slightly more than four times per year. Flooding of the main stem above Germanton and tributary flood plain land occurs on an average of approximately two to three times a year. This frequency of flooding has imposed severe limitations on the use of the flood plain land for agricultural purposes, resulting in relatively high damages on the land still being used for production of crops and pasture. Sheet erosion has removed approximately 75 percent of the topsoil from open upland soils, which has reduced their productivity approximately 40 percent.

Measures included in this plan are expected to reduce floodwater damages by approximately 73 percent. In the flood plain area from Walnut Cove to Germanton the maximum storm in the evaluation series would be reduced to approximately bank full stage. The planned degree of control meets all of the objectives of the sponsoring organizations.

This plan provides for a combination of land treatment and structural measures which will contribute directly to soil and water conservation and flood prevention. Such measures include (*a*) land treatment for watershed protection, (*b*) land treatment for flood prevention, and (*c*) structural measures for flood prevention, consisting of flood-water retarding structures and stream channel improvement. These measures will be installed within an 8-year period at a cost of $1,968,390, of which $1,168,348 will be provided by Public Law 566 funds and $800,042 by other funds.

Land treatment measures for watershed protection will be installed to provide maximum feasible protection to the upland. The cost is estimated to be $787,128. Federal assistance for these measures is limited to technical assistance, and $162,294 is provided for this purpose.

Land treatment measures for flood prevention will consist of roadside erosion control; critical area planting to grasses, legumes, and trees; and cooperative forest fire control. These measures will be effective in reducing runoff and and sediment production. The cost of these measures is estimated to be $207,454, of which local costs will be $83,865; and Public Law 566 costs, including technical assistance, will be $123,589.

Structural measures for flood prevention consist of 13 floodwater retarding structures which control runoff from 61.4 percent of the watershed and 21.2 miles of stream channel improvement. The estimated total cost of these measures is $973,808, of which Public Law 566 funds will pay $882,465; and local costs will amount to $91,343 for land, easements and rights-of-way, and administration of contracts.

The planned land treatment measures for watershed protection will be installed and mintained by landowners or operators in cooperation with their respective soil conservation district. Land treatment measures primarily for flood prevention will be installed and maintained as follows: roadside erosion control—funds for materials furnished from Public Law 566 funds, labor and equipment by the State highway commission, and maintenance to be part of the highway department's regular program; critical area plantings—to be cost-shared at rates similar to other going programs, maintenance by landowners and operators concerned; cooperative forest fire control—to be cost-shared on a 50–50 basis by Public Law 566 funds and the forestry division of the North Carolina Department of Conservation and Development. Maintenance will be performed by the forestry

division under provisions of the Clarke-McNary Act. Structural measures will be installed with Public Law 566 funds by contract let by the Stokes county commissioners, and maintenance will be performed by sponsoring organizations with funds provided by legal organization having power of taxation or levy, which as yet has not been organized. Funds will be placed in escrow to cover costs of maintenance until the legal organization is established.

The installation of planned structural measures and land treatment measures primarily for flood prevention will produce an estimated $78,948 of benefits. Average annual costs including operation and maintenance, are estimated to be $55,308. This gives a 1.4 to 1.0 benefit-cost ratio.

The proposed project is in harmony with the present development and anticipated future developments of the river basin.

OBJECTIVES OF THE WATERSHED SPONSORING LOCAL ORGANIZATIONS

Objectives of the watershed sponsoring local organizations are (1) to provide the maximum feasible protection from erosion to the upland, (2) to protect the flood plain from floodwater and sediment damages to the extent that it can be used for crops and pasture, (3) to relieve the upland of part of the burden of crop production by utilization of the flood plain, and (4) to protect the flood plain area from floodwater damages between Germanton and Walnut Cove so that this area can be used for industrial development.

Items 1, 2, and 3 are fundamental for agriculture. Item 4 is necessary to meet the total objectives of the sponsors.

Mr. Chairman, and members of the committee, your favorable consideration of this project will be greatly appreciated.

(The following were furnished for insertion:)

HOUSE OF REPRESENTATIVES,
Washington D.C. June 24, 1960.

Hon. FRANK E. SMITH,
House of Representatives, Washington, D.C.

DEAR FRANK: I hope you will forgive me for trespassing upon your valuable time particularly during the closing days of this Congress.

I am vitally interested in the flood control and soil conservation project for the Town Fork Creek watershed in Forsyth and Stokes Counties in my congressional district. This project, first suggested 6 years ago, has been approved by local State and Federal soil conservation agencies. In addition, the project is being sponsored by the Dan River and Tri-Creek Soil Conservation Districts and is supported by the Stokes and Forsyth County Board of Commissioners, farm bureaus and ASC committees and by the Northwest North Carolina Development Association, the Town Fork Watershed Association and other area groups.

Any assistance you may be able to lend me in bringing this project to a reality will be personally appreciated.

Sincerely yours,

RALPH J. SCOTT.

HOUSE OF REPRESENTATIVES,
Washington, D.C., June 29, 1960.

Hon. FRANK E. SMITH,
Chairman, Subcommittee on Watershed Development, House Committee on Public Works, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: I respectfully request your committee's consideration and approval of the upper Plum Creek watershed project. This project has been cleared by all of the agencies and is now awaiting a clearance by the Bureau of the Budget.

Since I am advised that this may be the last meeting of your committee, I would be deeply grateful to you if your committee could approve this project subject to final clearance by the Bureau of the Budget.

If you need any further information concerning this project I hope you will let me know.

Sincerely yours,

HOMER THORNBERRY.

Mr. BROWN. Mr. Chairman, this project is the Town Fork Creek watershed in Stokes and Forsyth Counties.

This is a watershed area of 84,521 acres. The project is sponsored by the Dan River Soil Conservation District of the Tri-Creek Soil Conservation District and the county commissioners of Stokes County.

The local organizations intend to form a watershed improvement district during 1961 to take over the construction and maintenance of the project. However, the county commissioners in Stokes County have agreed to proceed with the construction in the portion of it that they have responsibility for immediately. This is an area that has had very severe flood problems over a long period of time.

There have been 85 recorded floods in the last 20 years in this watershed doing damage to crops, pastures, fences, drainage ditches, and to 27–28 bridges and farm roads.

Flooding has been so frequent that a considerable acreage of land has gone out of production in this flood plain area. About 59 percent of the flood plain area is currently being used for crop and pasture land.

In addition to giving protection the project will permit about 700 acres of additional land to be restored to agricultural production, and there is also one industrial site comprising about 100 acres in the flood plain, out of the total of 3,834 acres in the flood plain.

This industrial site is in this general area [indicating] to which protection will be afforded by this project permitting its planned development.

This is an area of severe erosion in the upper Piedmont section of North Carolina. About 2,240 acres are being damaged or have been damaged and are being damaged seriously by gully erosion.

A part of the program will be the treatment of those acres by tree planting.

In this entire watershed 99 percent of the land is privately owned. There are 1,270 farms in the watershed having an average size of 67 acres and an average marketplace value at the present time of about $144.

The flood plain land is in 215 different ownerships ranging from 3 to 222 acres. Although 78 percent of those ownerships range from 10 to 49 acres, one of the principal values of this project will be to permit the shifting of cultivation from the upland areas on these farms down into protected bottom lands.

For example, it is anticipated that in the project as a whole the amount of land used for corn and tobacco will be decreased from 27 to 22 percent, but in the flood plain area the amount of land used for those crops will increase from 24 to 37 percent.

This we consider to be a very desirable shift in land use for the purpose of conservation, taking it off eroding lands and putting it into protected land while at the same time decreasing the total amount.

A major part of the flood plain area will have protection at a 5-year frequency level with overflow no more often than once in 5 years against a current condition of overflow of several times per year.

Incidentally, 75 percent of the floods in this watershed occur during the crop-growing season.

The total cost of this project will be $1,968,000 and the Public Law 566 portion of that cost will be $1,168,000, or 59 percent of the total. The local cost will be $800,000 or 41 percent of the total.

The project has a benefit-cost ratio of 1.4 to 1.

The benefits are evaluated as amounting to $60,818 annually against an annual cost for the structural measures of $42,618.

The project is scheduled for installation during a period of 8 years. The operation and maintenance costs will be $6,804 which will be assumed by the Watershed Improvement District when it is organized next year.

I believe that completes our presentation, Mr. Chairman.

Mr. SMITH. Thank you, Mr. Brown.

Any questions?

Mr. MCFALL. No questions.

Mr. BALDWIN. No questions.

Mr. BROWN. We have our information now on Plum Creek, Mr. Chairman.

Mr. SMITH. Fine.

I was going to tell the committee that Plum Creek is one that they expect to have cleared by the Budget Bureau momentarily.

A committee member is going to check on that.

In view of the hope that this will be the last subcommittee meeting, I thought we could have a presentation on it and perhaps approve it with the understanding that our approval would be made contingent upon Budget Bureau approval without setting up a formal procedure on this.

We will now go into the Plum Creek project.

PLUM CREEK WATERSHED, TEXAS

Mr. BROWN. Mr. Chairman, Plum Creek is located in Hays, Caldwell, and Travis Counties, Tex., in the drainage basin of the Rio Grande.

This comprises an area of 97,000 acres. The project is sponsored jointly by the Hays-Caldwell-Travis Soil Conservation District and the Plum Creek Conservation District. This is an area likewise which has suffered severe flooding over a period of many years causing extensive damage to agricultural land as well as to the town of Ulan, which is shown in the lower end of the project.

The 1936 flood in this watershed caused over $1 million damage and caused the loss of 16 lives in Ulan.

Flooding has prevented the farmers in this area from utilizing the highly productive bottom land to its full extent. Much of the bottom land is now used for pasture and meadow because of the frequency of flooding. During the last 29 years, there have been 13 major floods and 89 minor floods, most of them occurring in the growing season.

The productive capacity of the flood plain area below the structures comprises 8,728 acres and has been materially impaired by this frequency of flooding. In the watershed as a whole, the land use at the present time is 67 percent in cropland, mainly cotton, corn, and grain sorghum and 27 percent in grass with about 1 percent in woods and 5 percent in urban and miscellaneous uses.

The watershed area is entirely privately owned, contains 380 farms having an average size of 253 acres and said to have an average value per farm of about $20,000.

The flood plain area itself contains 150 ownerships ranging in size from 5 to 300 acres.

The project will consist of land treatment measures, the acceleration of land treatment measures recommended in that area including contour farming, crop rotation, cover cropping, pasture planning, range seeding, and rotation as well as pond terraces and diversions.

The structural measures consist of 21 floodwater retarding structures having a total capacity of 46,757 acre-feet. The annual damages in this project amount to $109,569 at the present time.

The project will reduce those damages by 86 percent and, in addition, will permit the restoration to former productivity of additional acreage which will produce a total annual benefit in this project of $151,600.

The total cost of this project is $3,445,000 of which Public Law 566 cost will be $2,284,000 or 66 percent. The other costs to local people will be $1,161,000 or 34 percent.

The project has a benefit-cost ratio of 1.4 to 1.

For the structural measures alone the benefits are appraised as amounting to $146,000 annually against the amortized cost over 50 years of the structural measures of $103,000.

It is proposed to install this project within a 5-year period.

The Plum Creek Conservation District is a legal organization under Texas law which has the authority and the resources necessary to install and maintain structural measures, including power of eminent domain. Funds for this project will be raised by districtwide ad valorem tax.

The operation and maintenance cost will be $5,064.

The project will complement the Corps of Engineers reservoir below this area, the Gonzales Reservoir by materially reducing the sediment delivery from this area and thereby increasing and prolonging the life of the downstream reservoir.

Mr. SMITH. Thank you, Mr. Brown.

Mr. BROWN. That covers our presentation.

Mr. SMITH. Any questions?

Mr. MCFALL. I would like to ask a question perhaps not directly related to the project.

These people have irrigation in here, a reservoir here, to provide irrigation, or do they? Is the land such that it could not produce irrigated crops? I did not think you would be prepared to answer such a question but I thought you might know the answer.

Is there a possibility that perhaps some of the water that is retarded here might be used for irrigation in some way or another?

Mr. BROWN. I am afraid I cannot answer that offhand, Congressman.

Mr. SCHWENGEL. Do you want to answer that question? The whole watershed program tends to retain water in the soil and keep the water level much higher.

Mr. BROWN. Congressman, this is in the southeastern part of Texas and the rainfall in that area is about 33 inches. Normally, with that much rainfall, irrigation, except very localized supplementary irrigation, would not be used.

Mr. MCFALL. They have summer rainfall as well?

Mr. BROWN. Yes. I think seasonally it is distributed to provide adequate moisture for cotton and corn in normal times.

Mr. SCHWENGEL. Does not this whole program tend to keep the water level up?

Mr. BROWN. Very definitely tends to stabilize the streamflow in the streams to increase the water table in the streambeds. Of course, in the area surrounding the reservoirs themselves, from percolation from the pool area in the reservoirs, that tends to improve the ground water condition and certainly in the flood plain areas the tendency is to cause the streamflow as it becomes more regular, the ground water table is increased in the bottom land areas and it is protected.

Mr. SCHWENGEL. I was also interested in a statement you made at the close of your presentation where you made reference to the fact that it would tend to reduce the silting going on in the dam below. I was wondering if there are any special studies on what the effects of this silting would be by instituting this program.

Mr. BROWN. There have been a good many studies made, Congressman, on the rates of silting to be expected which are taken into account in the design of all reservoirs, both the large ones downstream and the smaller ones upstream.

We have made a number of studies as a part of the research program in the Department to determine what the net effect of a treatment program on watershed areas would be. It is highly effective.

In the first place, you can see on this map that the area that is covered in green, the area above the structures is a major part of this watershed area. The combination of the land treatment under here plus the structure which is an effective sediment trap itself for 50 years and will not pass more than 5 percent probably, at the most, of sediment that originates above it. The combination of this program would undoubtedly reduce the total sediment output at the lower end of this watershed here by 75 or 80 percent.

If you multiply that by all of the small watersheds above the Army's reservoir, you have thereby a greatly prolonged life. Many of these larger reservoirs have tens of thousands of acre-feet of capacity, as you know, provided for sediment storage. To the extent that that can be reduced, then you can either use the water that is in that space a longer period for conservation purposes or you can increase your flood control capacity.

Mr. SMITH. Mr. Baldwin?

Mr. BALDWIN. Mr. Brown, I have a question.

Mr. BROWN. I see we do have a figure here.

I will have to admit that I have not studied my lesson very much on this project because we did not anticipate testifying on this today. However, there is an estimate for this project that shows that the sediment accumulation in the authorized Gonzales Reservoir, without this project, would be 151 acre-feet per year and with this project in place would be only 59 acre-feet a year.

This project alone would apparently have the effect of reducing it almost two-thirds.

Mr. SCHWENGEL. Is that taken into consideration in the cost-benefit ratio?

Mr. BROWN. We have not translated that into a monetary value. I do not believe we have in this case.

I might make this statement: In general, we have not gone below the project areas to evaluate further benefits, if the benefits within the project are sufficient to provide ample justification. Apparently in this case, there is a figure though and I am told it is $4,400 annually.

Mr. BALDWIN. Mr. Brown, when did this project go to the Bureau of the Budget?

Mr. BROWN. We are not sure. It was on the Assistant Secretary's desk for signature yesterday afternoon. It either went over there last night or it is anticipated that it will go over this morning.

Mr. BALDWIN. Is there anything that would cause you to feel any question about the Bureau of the Budget approving it?.

Mr. BROWN. No, sir. Our understanding from talking with their staff people is that they intend to send it up just as soon as they receive it.

Mr. BALDWIN. Thank you.

Mr. BROWN. You understand, the copies of these projects actually go to the Bureau of the Budget a month in advance of the time they are officially transmitted from the Office of the Secretary. The Bureau of the Budget has ample time to study the project before the official transmittal.

Mr. BALDWIN. Thank you.

Mr. SMITH. In relation to that, I will ask Mr. Brennan to supplement Mr. Brown's answer.

Mr. BRENNAN. Mr. Brown, the conversations I have had with the Bureau of the Budget on Plum Creek bear out what you said. They have had the advance copy of the report and the technical staff I talked to told me that they could see no particular difficulty with it, but they could not guarantee the clearance.

Mr. SMITH. Thank you.

Thank you, Mr. Brown.

We have now gotten the statement by Mr. Kearns in regard to the Mill Run watershed project in Pennsylvania and without objection we will include Mr. Kearns' statement in the record and have testimony on that project.

(The statement follows:)

STATEMENT OF REPRESENTATIVE CARROLL D. KEARNS 24TH DISTRICT, PENNSYLVANIA

Mr. Chairman, members of the committee, I appear this morning to request the approval of this subcommittee, and the full Public Works Committee, of allocation of construction funds under the Watershed Protection and Flood Prevention Act, as amended, for Mill Run watershed work plan PA–2–2056 in Crawford County, Pa.

This flood prevention project in the Mill Run watershed is most important to my district because it will lessen the frequent flooding that has plagued the city of Meadville and will lower flood damages to industry, business, and homes along Mill Run—a small stream which flows through the central business district of Meadville. This stream, in recent years, has caused tremendous damage to the business center of Meadville, the county seat and largest city of Crawford County. We are assured that conservation practices on the land throughout the watershed, combined with the two flood prevention dams that are planned, will reduce this annual flood damage above the flood plain of French Creek.

Incidentally, the Army Engineers in Pittsburgh hope to complete within the next month the survey for an overall French Creek flood control project; in the meantime, prompt action on Mill Run will provide great interim relief and definite encouragement to the people of this area.

Mr. Chairman, the Crawford County Soil Conservation District, in Cochranton, Pa., the Crawford County Commissioners and the City Council of Meadville—local sponsoring organizations—as well as the local endorsing organization—the Meadville Chamber of Commerce—are most anxious that congressional approval be secured before adjournment in order that almost one year of valuable time in

starting the Mill Run project is not lost to this flood-ravaged city in northwestern Pennsylvania.

Thank you, Mr. Chairman.

STATEMENT OF JOHN H. WETZEL DIRECTOR, WATERSHED PLANNING DIVISION—Resumed

Mr. WETZEL. The Mill Run project is located immediately above the town of Meadville, Pa. It is in Crawford County. Meadville is a town of about 30,000 population.

The primary purpose of the watershed project on Mill Run is to provide flood protection within the town of Meadville, which has suffered very disastrous floods over a long period of time, the most recent being the 1956 flood, which caused $170,000 damage in Meadville alone, plus extensive damage to the farm-to-market roads that run through the watershed.

The project contains 7,814 acres. It is sponsored by the Crawford County Board of Commissioners, which is the county government, the Crawford County Soil Conservation District and the government of the city of Meadville.

The project includes not only the flood protection for the city of Meadville, but also a rather extensive fish and wildlife development in the upper watershed area.

This watershed is typical of many of the watersheds in western Pennsylvania in that the upper watershed lands consist largely of marshland which loads up from the runoff, breaks over and causes the very extensive flooding condition.

The ownership in the watershed is a hundred percent private. There are 60 farms which average about 75 acres apiece and have an average value of roughly about $9,000.

The principal measures that are proposed are the land treatment measures on the 60 farms up in the watershed lands plus one floodwater retarding structure with a total capacity of 581 acre-feet which is located just above the city of Meadville and a multiple-purpose structure which shows on this map as two separate structures. It is a rather interesting structure in that this entire area between these two structures is a marsh that will be developed as a wildlife marsh with the cost borne by the Pennsylvania Fish Commission.

At a given elevation the floodwaters from this marsh area will break over into Mud Run, which will carry the waters out of the watershed area into Pymatuning Lake drainage.

The flood plain area that is being benefited, as I said, is primarily within the town or within the city of Meadville. The projected project will provide practically 100 percent protection against 100 years' storms.

One point that has been seriously damaged in the city of Meadville is a high school. The project will provide a thousand-year protection or protection against a thousand years' storms for the area in which the high school is located.

The costs involved, total cost of the project, is $470,000 of which the Public Law 566 funds will be $339,000, local people will provide $131,000.

The cost of administering the contract to be borne by the local people is $2,500.

The cost of the easements for the three structures is $3,000 and the local people in addition will provide $34,000 for relocating gaslines, sewers, and a park in the city of Meadville.

The benefit-cost ratio is 1.7 to 1 and it is planned to install the project over a 5-year period.

In accomplishing the program, the Crawford County Board of Commissioners have assumed the responsibility for obtaining all of the easements necessary and to pay for all of the relocations that are necessary.

They will also provide the necessary administration of contracts and have guaranteed to operate and maintain the structural measures.

The Pennsylvania Fish Commission will put up approximately $23,000 to pay for half of the cost of the fish and wildlife capacity that will be incorporated into the marsh area between the two structures.

The cost of operating the structural measures is $1,200 and this plan has been coordinated completely with a program that the Corps of Engineers are now planning for French Creek, which is several miles below the confluence of Mill Run, several miles below the city of Meadville, where Mill Run enters into French Creek.

Mr. SMITH. Thank you very much, Mr. Wetzel.

Mr. BALDWIN. I have a question.

Mr. SMITH. Mr. Baldwin.

Mr. BALDWIN. This project has a permanent storage area for fish and wildlife development. The question I would like to ask is What determines in these kinds of projects whether you would ever put in something of this kind? For example, in my own district we have the Marsh-Kellogg Creek project which was approved last year. After it was approved, people suddenly got all enthusiastic about having a permanent storage capacity with fishing, boating, swimming, et cetera. Because it had been already approved, the people who were going to be subjected to flood dams were opposed in that it might defer the eventual construction of the flood protection and so they had quite a wrangle about it. I would like to know just what is the guideline that you follow. Most of these do not have any permanent retention capacity. Most of them, as I understand them, as you have presented them at all these hearings, have just controlled runoff. In other words, they have a certain sized outlet, smaller than the flood incoming runoff but it lets it out and after a period of 4 or 5 days after the flood the intake is completely let out through this smaller outlet.

What determines when you put in a permanent storage capacity and when you do not?

Mr. WETZEL. Our first objective is to provide an appropriate level of flood protection for the flood damage areas. If it is an urban area; we strive for protection against a hundred-year frequency storm. That is the first objective of the watershed project. If that level of protection, an adequate level of protection for the damage areas can be provided, or the sites are available to provide that adequate level of protection plus some fish and wildlife capacity in the structure and the local people are willing to pay half of the additional costs for including fish and wildlife capacity we will include it in the plan.

The first priority, however, on any site, is to be used for providing an adequate level of protection, which we consider 100-year frequency in your ban areas.

Mr. BALDWIN. Does the initiative or proposal have to come from the local people or do you ever propose it from the nature of the project?

Mr. WETZEL. If we see that there is opportunity for including fish and wildlife capacity we very definitely will call it to the attention of the local people and also to the attention of the State fish and game agencies but they must make the decisions, since they are putting up half of the cost. There are several other requirements involved including fish and wildlife capacity, the first, of course, being that the local people will put up half of the additional costs for including that capacity. The second is that the local people will guarantee that that structure, the water in that structure, will be open to the public access at all time. As far as evaluating the fish and wildlife capacity in the structure, we assume that if the local people are willing to put up half the cost of the fish and wildlife capacity, that the benefits will be equal to the costs.

Mr. BALDWIN. Thank you.

Mr. WETZEL. In Marsh-Kellogg I do not recall the situation there. I believe that they needed every bit of capacity they could get to provide an adequate level of protection in the flood damage areas.

It was probably for that reason that they did not incorporate fish and wildlife and it is probably proper that people below would object to decreasing the level of the protection in the flood damage areas just to incorporate permanent fish and wildlife water intrastructure. I am not sure of the situation. We will certainly look into it, Congressman, and see if there is an opportunity for providing this adequate level of protection, plus the fish and wildlife capacity and if so, the plan can very easily be amended to include that.

Mr. BALDWIN. I would appreciate it if you would look into it.

Mr. WETZEL. We will be very glad to do that and let you know.

Mr. BALDWIN. Thank you.

Mr. SMITH. Mr. McFall?

Mr. MCFALL. Off the record, please.

(Discussion held off the record.)

Mr. SMITH. On the record.

I think this sounds like one of the best bargains that any community in the country could get out of this program. They get flood protection for the town, plus this really sizable lake, all for $130,000. It sounds like the people are really going to benefit.

That concludes the testimony on the projects.

Mr. SMITH. Thank you very much, Mr. Brown. We appreciate the cooperation of you and your associates.

Mr. BROWN. We will be happy to cooperate with you in what you are seeking to do, Mr. Chairman. Anytime we can help, just call on us.

(Whereupon, at 11:05 a.m., the committee adjourned to the call of the Chair.)

SMALL WATERSHED PROGRAM

TUESDAY, AUGUST 23, 1960

HOUSE OF REPRESENTATIVES,
COMMITTEE ON PUBLIC WORKS,
SUBCOMMITTEE ON WATERSHED DEVELOPMENT,
Washington, D.C.

The subcommittee met, pursuant to call, in room 1302, New House Office Building, at 10:10 a.m., Hon. Frank E. Smith, chairman of the subcommittee, presiding.

Mr. SMITH. The Subcommittee on Watershed Development will begin its hearings.

We have a number of congressional witnesses this morning, and in order to expedite matters, we will hear from them first.

We are pleased to have as the first witness our very distinguished majority whip, Hon. Congressman Carl Albert.

STATEMENT OF HON. CARL ALBERT, *MEMBER OF CONGRESS* FROM THE STATE OF OKLAHOMA

Mr. ALBERT. Thank you, Mr. Chairman, and members of the committee.

FOURCHE MALINE CREEK WATERSHED

I am here on behalf of the Fourche Maline Creek watershed, which is in my congressional district in two of the counties called Latimer and Le Flore Counties. In addition to what the Department has said about this watershed in its report, I would like to add a few comments of my own.

This watershed is near my own home, and I have been familiar with it all my life. There have been many major floods in the watershed, and the Department has recommended the completion of this project which would curtail those floods considerably, as will be shown by its report.

In 1945 there were seven floods in the watershed, and if the gentlemen of the committee will recall, only a few weeks ago, last spring, Oklahoma was hit by a series of major tornadoes. Wilburton, Okla., which is the largest town in this area, was the most severely stricken. The tornado killed, I think, 11 people and injured many others, and destroyed a lot of the town.

It was followed immediately by one of the largest floods that that area has ever had. So that country has really suffered, and the whole area is vitally interested in this project, both as a conservation project and as a water use project. It would be a shot in the arm to an area and a morale boost to an area that has suffered more, I think,

than any community in Oklahoma during the past year from the ravages of nature.

This is in an area of eastern Oklahoma, where income is low. It used to be a mining area and the mines have more or less been abanddoned, but it does contain a lot of fine ranchland and a considerable amount of good farmland. Fourche Maline Creek is one of the earliest creeks ever explored by the French, and that is where it gets its name. The French traders were there in the early 1600's. It is a very interesting part of Oklahoma.

The recreational benefits from this project will probably be as great as any other project of this kind in that part of the country because it is the most scenic part of Oklahoma.

Mr. SMITH. Mr. Albert, I live in Leflore County, Miss., and of course I am very much interested in Le Flore County, Okla., I guess.

Mr. ALBERT. Thank you.

I believe that completes my statement, Mr. Chairman. The supplement of the Department is attached here to my statement, but I am sure the members of the subcommittee have that at their disposal.

Mr. SMITH. Any questions?

Mr. CRAMER. How long has this flooding condition been going on?

Mr. ALBERT. From time immemorial. They have always had floods in this area. Eastern Oklahoma has much heavier rainfall than other parts of the State. This programs we feel is the salvation of the river and creek bottomland in eastern Oklahoma. It is very popular among the farmers and Oklahoma has been one of the leaders in the project. Witness the Washita, where some of the subwatersheds have been completed for several years. It has been not only very popular, but everyone who has seen the projects has been convinced it has been most beneficial.

Mr. CRAMER. Thank you.

Mr. SMITH. Thank you very much, Mr. Albert, for your statement.

Mr. ALBERT. Thank you.

LEADER-MIDDLE CLEAR BOGGY CREEK WATERSHED

Mr. SMITH. We have with us Congressman Tom Steed on behalf of the Leader-Middle Clear Boggy Creek watershed, Oklahoma.

STATEMENT OF HON. TOM STEED, MEMBER OF CONGRESS FROM THE STATE OF OKLAHOMA

Mr. STEED. Mr. Chairman and members of the committee, I want to join my colleague in what he has said, and add just a very brief statement.

This project in which we are mutually interested is one of several that deals with this whole area which, in addition to being some of the richest agricultural area in Oklahoma also includes some of our finest ranchland, and by itself, I think, is more than justified. However, when you consider it in the overall picture of fitting in with some five or six other similar projects, four or five of which are already under construction and being developed, then I think the total value of it is more than it will show by itself. We are hoping, of course, that this development over this very wide area through this type of approach can be continued in an orderly way.

It is very difficult to describe the physical advantages to it, except to say that it is an area where the rainfall, I think, averages about 35 inches a year, and periodically it is subjected to cloudbursts. When these happen it does a lot of damage. It is very destructive and it makes it difficult to improve the area, because it is subjected to these almost annual conditions where anything done is torn out and washed out in a matter of hours.

We know that this sort of an approach will control that and stop that damage. There is no other way I know of that it can be done.

Mr. SMITH. Thank you very much, Mr. Steed.

Any questions?

Mr. CRAMER. We are glad to have our former member of the committee back. We certainly miss you on the committee, Tom.

Mr. STEED. I miss being here too and I do appreciate the opportunity of being here, and thank you for the privilege of letting me be here again today for a few minutes.

Mr. SMITH. Thank you, sir.

We have a third Oklahoma project, the Upper Black Bear Creek watershed in Oklahoma, and we have as a witness Congressman Page Belcher.

UPPER BLACK BEAR CREEK WATERSHED, OKLAHOMA

I might say that Congressman Belcher talked to me about this project as well as the other two projects, and has been especially interested in all of them.

Mr. Belcher, we are glad to have you, sir.

STATEMENT OF HON. PAGE BELCHER, MEMBER OF CONGRESS FROM THE STATE OF OKLAHOMA

Mr. BELCHER. First I want to express my sincere appreciation to you and the committee for taking this matter up. I suppose I was a little bit late maybe in making the request, and I certainly appreciate your taking it up at this time.

I am only going to take a minute or two of your time because the Department witnesses are here to present the project.

This project affects about three very fine agricultural counties of my district. It has been underway for a long time. I think it is a good project and the local people have the necessary funds to begin construction and they are all ready to go subject to the approval of this committee.

This project on June 22 was approved by the Senate committee, and as I say, I think it is a very good project. I surely appreciate the committee's taking the time here in the closing days of this session to give it consideration.

Mr. SMITH. Thank you very much.

Are there any questions?

Mr. CRAMER. I would like to ask just one question: Do you know about how long it has taken to get this project to this stage?

Mr. BELCHER. Well, it has taken several years. I don't remember exactly when it did start. Probably the Soil Conservation Service could answer that question, but I do know it has been a long time.

Mr. CRAMER. I was just interested in that because I am quite interested in some projects in Florida that have been sitting on the shelf

for some time, and I know the time element involved in some of these seems to be extremely long. Of course, I realize it is the State's decision to a large extent, but whether we need to beef up the program with more money, or need to set up a new procedure, I do not know yet, in order to put these projects into effect, but there are certainly a lot of meritorious projects that are sitting on the shelf which there is apparently not adequate funds to take care of.

Therefore, the States are not submitting them or requesting approval. The result is that many of the areas that need assistance do not get it.

Mr. BELCHER. I think that is right. There are a lot of hurdles to get over in one of these projects because you have so many different people involved. I think probably in this particular project there was a local delay in getting the thing started, as well as a delay in the State and the Soil Conservation Service. It takes a long time to get one of these things worked out. I do not know what it would take to speed them up.

We have had a number of floods since this thing started and they have done serious damage. If we had been able to get right on with it and go through with it, all those floods would have been stopped.

Mr. CRAMER. I want to congratulate the gentleman from Oklahoma for his persistence in this matter. My question did not mean to imply he had not followed through on it. I want to congratulate him on his efforts.

Mr. BALDWIN. Will the gentleman yield?

Mr. CRAMER. Yes.

Mr. BALDWIN. I would like to join my colleague, Mr. Cramer, in saying you are to be commended, Mr. Belcher, in bringing this matter to the attention of the committee. I have also observed you are very diligent in working for the best interests of your constituents and in working for whatever might be for the improvement of their condition for which you should be commended.

Mr. BELCHER. Thank you very much.

Mr. SMITH. Thank you very much, Mr. Belcher.

MISTEGUAY CREEK WATERSHED, MICHIGAN

The fourth project we have today is Michigan, the Misteguay Creek watershed in the district of our colleagues, Alvin Bentley and Charles Chamberlain.

Congressman Bentley, would you like to make a statement?

STATEMENT OF HON. ALVIN BENTLEY, MEMBER OF CONGRESS FROM THE STATE OF MICHIGAN

Mr. BENTLEY. Thank you, Mr. Chairman and members of the subcommittee. I do not have a prepared statement, but I do come before you this morning to request your favorable consideration of this work plan for the Misteguay Creek watershed, which covers three counties in eastern Michigan—Saginaw, Shiawassee Counties in my congressional district, and Genesee County in the congressional district of my colleague, Mr. Chamberlain.

This is a project which has already received approval from the Senate Public Works Committee. The program itself and the work

plan is fully set forth in this document which I have here before me, and I will not take the subcommittee's time to go through a lot of figures, but will only say this has grown out of a very difficult drainage problem in this area, which goes back to 1946, when the injunction was laid down by certain individuals, and that injunction for the last 14 years pretty much blocked any improvement or even maintenance in the local drainage works.

The Misteguay plan for small watersheds was approved, I think, in January sometime in 1957, and it was debated back and forth at local levels. There was a substantial amount of local opposition to it. That opposition, I think, is pretty much dissipated at the present time. The plan has received the approval of the three county drainage commissioners in this area, and has received the approval of the intercounty drainage board. I understand that the local interests are prepared to go ahead and furnish their share of the money.

I also understand that 50 percent of the individuals who will be affected by the retaining measures have signed soil conservation agreements, so, as far as anybody knows, all of the steps on the local and States level have been taken as required by law.

The Senate acted on this particular project, and it is now up for the favorable consideration, I hope, of this subcommittee and the full committee.

I would request, as I say, that favorable action be taken on it, if it can be, at this session, since we have an open-end appropriation, which will enable funds to be made available immediately to start work on this, assuming we have favorable consideration here.

Mr. SMITH. Thank you very much, Mr. Bentley, for your statement.

Are there any questions?

Mr. CRAMER. I would like to say to my distinguished colleague that this project has one of the highest benefit-cost ratios I have seen in some time.

Mr. BENTLEY. 9.6, Mr. Cramer.

Mr. CRAMER. 9.6 to 1, and it certainly speaks well for the project.

I want to congratulate the gentleman for his action in bringing it to the attention of the committee.

Mr. BENTLEY. Thank you.

Mr. SMITH. Thank you very much, Mr. Bentley.

Mr. Chamberlain, we will be glad to hear from you.

STATEMENT OF HON. CHARLES CHAMBERLAIN, MEMBER OF CONGRESS FROM THE STATE OF MICHIGAN

Mr. CHAMBERLAIN. Mr. Chairman and ladies and gentlemen of the committee: I greatly appreciate this opportunity to appear before this committee in behalf of the Misteguay watershed project. Congressman Bentley has pretty much outlined this project, and I would like to support his position and say that I have just returned, as you people have, from your talks with your constituents, and I have had several contacts by those in this area with respect to this project, urging that it be approved.

I know of no opposition to it locally, and I have prepared a very brief statement here that I would like to file with the committee.

In addition, I also have a fact sheet that has been made available to me several months ago with respect to this project, that I should also like to file with the committee for your record.

As I am a member of the Armed Services Subcommittee, which is meeting at the present time, I would be most grateful if I could be excused.

If there are any questions you have before I leave, perhaps I might be able to answer them.

Mr. SMITH. Are there any questions?

(No response.)

Mr. SMITH. Without objection, the statement of Mr. Chamberlain and the fact sheet he has submitted with respect to the Misteguay watershed will be made a part of the record at this point.

(The documents referred to are as follows:)

FACT SHEET—MISTEGUAY WATERSHED

1. What is the size in acres and the number of farmers in the Misteguay watershed? There are (*a*) 103,961 acres and (*b*) 1,350 farmers. It is 24 miles long and varies from 3 to 10 miles wide.

2. Who are the sponsors of this watershed project? The Genesee, Saginaw and Shiawassee Soil Conservation Districts and the Misteguay Creek Intercounty Drainage Board.

3. Why was assistance requested as a watershed project? Approximately 68 percent of the land in the watershed needs improved drainage. This has been prohibited by injunctions against the county drain commissioners. This was by court order dated 1946.

4. Why is there Federal participation in this project? At the request of the sponsoring local organizations in an application dated October 1957.

5. What are the proposed measures that will reduce the flooding hazard? These are: (*a*) three floodwater retarding structures, (*b*) 5.63 miles of levees, and (*c*) 26.94 miles of channel improvement.

6. What are some of the land treatment measures needed in the watershed? These are: (*a*) 5,150,000 feet of tile; (*b*) 640 miles of open drains; (*c*) 250 acres of waterways; (*d*) 7 miles of diversions; (*e*) 286 erosion control structures; (*f*) 16,600 acres of cover crops; and (*g*) 568 acres of tree planting.

7. What is the comparison of channel work only on the Misteguay compared to the use of floodwater retarding structures? Estimates have been presented. These are based on improved drainage for the watershed area. They would probably give something less than a 10-year level of protection as far as flood prevention is concerned.

8. What is the estimated annual floodwater damage? (*a*) With project installed, $15,031 and (*b*) at present time, without project, $208,495.

9. How will floodwater retarding structures benefit land owners downstream? (*a*) Reduce peak flow by two third. From 6,000 cubic feet per second down to 2,000 cubic feet per second, (*b*) flooding will be less frequent (25-year level of protection), and (*c*) the extent of flooding will be reduced.

10. How much floodwater storage will there be in total above the three floodwater retarding structures? Approximately 7,000 acre-feet. This is the equivalent of 1 foot of water over 7,000 acres.

11. What costs are a responsibility of the local people? Land easement, right-of-way, flooding easements, administering contracts, maintenance, and approximately 65 percent of the costs on channel improvement.

Local people will also apply land treatment at their own expense, but with technical help from the Soil Conservation Service and cost-sharing with the ASC county committee.

12. What costs will be paid from Federal funds (Public Law 566)? (*a*) Engineering costs for design and installation of planned measures and (*b*) construction costs for flood prevention measures (floodwater retarding structures and levees).

13. What are anticipated returns per dollar spent on the project? For the total project, it is estimated at $9.60 per $1 spent.

14. Over what area will local cost of the project be spread? The costs for each part will be spread over the area benefiting by that particular measure.

15. Who lets contracts on floodwater retarding structures and channel improvement? The sponsor with authority under State law to operate and maintain works of improvement.

16. Who is responsible for maintenance? The sponsoring local organization which had power under State law to operate and maintain works of improvement.

17. When completed, what control will be held by the Federal Government? None. This is a local project maintained by the sponsoring local organizations.

18. How much will it cost me? This question can be answered only after a determination has been made as to the amount of construction cost, if any, that would be levied over the townships at large or assumed by the highway departments. Then, too, there would be a need for determining who was being benefited (and how much) by the installation of the planned measures. Only after these determinations have been made, and actual construction costs were known, could an answer be given as to the exact amount it will cost you.

Based on local cost estimates made to date, the average per acre cost for the various planned measures would be as follows:

	Per acre costs	Area benefiting
Floodwater retarding structures	$2.20	Misteguay Inter-Co. Dr. District.[1]
Peart drain levees	.99	Peart Inter-Co. Dr. District.[2]
Savage drain channel	1.51	Savage Drain District.[2]
Misteguay Creek channel	1.38	Misteguay Crk. I.C. Dr. District.[2]
Rush Bed Creek channel	1.50	Rush Bed Crk. Dr. District.[2]
Onion Creek channel	4.61	Onion Crk. Dr. District.[2]
Porter Creek channel	.92	Porter Crk. Dr. District.[2]
Northwood Creek channel	3.12	Northwood Crk. Dr. District.[2]

[1] Including costs for land for location of structures and for flooding easements.
[2] Assumes that no local cost outlay will be necessary for obtaining land for location of channels.

The above costs are only average cost per acre over the area benefiting and do not consider the fact that some costs may be assumed by the townships at large, or by the county road commission.

STATEMENT OF REPRESENTATIVE CHARLES E. CHAMBERLAIN, REPUBLICAN, OF MICHIGAN, ON MISTEGUAY CREEK WATERSHED PROJECT

Mr. Chairman, I greatly appreciate the opportunity to appear before this committee regarding the need for the Misteguay Creek watershed project which is before you this morning. As has already been discussed, the Senate Public Works Committee has approved this project and as soon as approval is given by this committee, the Michigan administrator of the Soil Conservation Service can authorize the project for operations, since the work plan for the watershed has gone through the necessary State and Federal agency review.

Flooding of valuable agricultural land in the lower reaches of Misteguay Creek has caused people in this part of the watershed to raise an injunction restraining agricultural drainage in the upper two-thirds of the watershed. The sponsoring local organizations are requesting Federal assistance under the authority of Public Law 566, as amended, to install works of improvement to solve various aspects of their watershed problem, including flooding of crops and pasture, roads, buildings, levees and bridges, but primarily of crops, and inadequate drainage of agricultural lands due to inadequate outlet channels.

It is proposed that three floodwater retarding structures be built, 5.69 miles of levees, and 26.94 miles of channel improvement be made. This will affect 103,961 acres and 1,350 farmers. The land easements, right-of-way, flooding easements, administering contracts, maintenance, and approximately 65 percent of the costs on channel improvement will be the responsibility of the local people who will also apply land treatment at their own expense, but with technical help from the Soil Conservation Service and cost sharing with the agricultural soil conservation county committee.

It is estimated that the annual floodwater damage at the present time is $208,495 and after the project is installed this damage will be reduced to about $15,031 annually. It is also anticipated that for the total project, $9.60 will be returned for each $1 spent.

I know that your committee has on record the statistics concerning this watershed so I will conclude my brief remarks. I have been contacted by a number of persons in Genesee County who are vitally interested in this project. In their behalf, and in view of the need for better drainage resulting in increased crop yield and flood control measures, I urge that every possible consideration be given for approval of the Misteguay Creek watershed program by your committee.

Thank you.

Mr. SMITH. Thank you very much, Mr. Chamberlain.

Mr. Chamberlain. Thank you.

Mr. SMITH. I would like the record to show also that Senator McNamara and Senator Hart have made requests for favorable consideration of this project.

That now concludes the congressional witnesses.

I would like now to ask Mr. Brown and his colleagues to give us testimony from the Soil Conservation Service with respect to these projects.

Mr. BROWN. Mr. Chairman, Mr. Wetzel will explain the first project, which is the Fourche Maline project.

Mr. SMITH. All right, Mr. Wetzel, you may proceed with your statement.

STATEMENT OF JOHN H. WETZEL, DIRECTOR, WATERSHED-PLANNING DIVISION, SOIL CONSERVATION SERVICE—Resumed

Mr. WETZEL. Mr. Chairman, it is a pleasure to appear before your subcommittee again.

The first project I would like to go over is the Fourche Maline Creek watershed in Oklahoma, which is located in Latimer and Le Flore Counties. It is part of the Arkansas-White-Red River Basin, and empties into the Corps of Engineers' Lake Wister at this point.

The watershed has an area of 274 square miles, or 175,360 acres.

The sponsors of the project who submitted the application for assistance and have entered into an agreement on the work plan are the Latimer County Soil Conservation District, the Le Flore County Soil Conservation District, and the newly organized Fourche Maline Conservancy District.

This area has been plagued by flooding from time immemorial. Back in the memory of the oldest residents, they can remember no growing season which was completely free of floods. In the period from 1939 to 1958 there were 35 major floods in the watershed, a major flood being defined as one which inundates at least 50 percent of the flood plain area.

The largest flood of record with the exception of the most recent one this spring, on which we do not have accurate information, occurred in 1959, when 90 percent of the flood plain area was inundated. This entire area, as the Congressman explained, is somewhat economically depressed, due to the fact that it had previously been quite a substantial coal mining area. The coal mines have been largely abandoned at the present time due to the fact that they could not compete with some of the highly mechanized operations in other parts of the State. As a result, the land in the watershed is rapidly being returned to agriculture, and considerable effort is being made to improve it for agricultural use.

The watershed contributes sediment to the Corps of Engineers' Lake Wister, and as I said, it is at this point. This program will provide a substantial reduction in the amount of sediment which will be contributed to the reservoir.

The landownership in the watershed is the Federal Government owns 2 percent of it. There are 3,900 acres, which is the area around the Corps of Engineers' Lake Wister. The State owns 6 percent, or 10,000 acres, which is in a part of the Robber's Cave State Park, and

the headquarters of the area, which is quite a scenic and recreational area.

Ninety-two percent of the watershed area is in private ownership. There are about 500 farms in the watershed, which average about 233 acres per farm. The principal measures which have been proposed for the watershed project include land treatment measures, which include the improvement of hay and pasture, and substantial farm pond construction, and substantial woodland protection measures in the upper part of the watershed, which is primarily in woodland.

The structural measures proposed are 14 floodwater retarding structures as shown in blue on the watershed map, for a total capacity of 39,000 acre-feet. The largest of these structures is 5,357 acre-feet, and they range from that size down to about 3,000 acre-feet. The 14 floodwater retarding structures will control flood runoff from 52 percent of the watershed.

The flood plain area in green, which will be benefited by the program, comprises about 15,000 acres.

The program will reduce the amount of sediment entering Lake Wister, the Corps of Engineers' dam, by about 1 million tons over the installation period, or 50 years that the project will be installed.

After the program is installed, 51 of the 121 floods which were studied during the evaluation period will be completely prevented, and more than 40 percent of the flood plain will be flood free at least every 3 years.

Most of the major floods will be reduced to the status of minor floods.

The average annual damages in the watershed are $142,000. With the project they will be reduced 74 percent to $36,000.

The cost of the project as proposed by the local people, total cost, is $3,562,000, of which the local people will pay 25 percent, or $880,000, and the Public Law 566 funds will provide 75 percent, or $2,682,000.

Local people have agreed to administer and let the necessary contracts at a cost of $4,200. They have agreed to relocate a number of bridges and two highways at a cost of $44,000, and they are guaranteeing the necessary lands, easement, and rights-of-way at a cost to them of $71,000.

The benefit-cost ratio is 1.2 to 1, and the project was proposed for installation over a 10-year installation period.

The local people have already agreed with the Fourche Maline Conservancy District, which was set up under the laws of the State of Oklahoma. This conservancy district has the right of taxation and of eminent domain in order to provide the necessary lands, easements, and rights-of-way. The conservancy district also guarantees the operation and maintenance of the structural measures at a cost of $2,185.

There has been substantial interest in incorporating municipal water supply for the city of Wilburton in two of the structures located at this point. The State fish and game agency also indicated an interest in incorporating the fish and wildlife capacity in two of the larger structures. However, neither of the organizations have adequate funds at this time to enter into a firm agreement on bearing the local cost for this additional capacity, but if the project is developed it may be they will be in a position to incorporate this additional capacity in the structures.

Mr. SMITH. Thank you very much, Mr. Wetzel.

Are there any questions on this project?

Mr. EDMONDSON. I would like to ask one question.

It is my understanding from the economic standpoint this is one of the lowest income areas in the State of Oklahoma. Is that correct?

Mr. WETZEL. I understand that is so.

Mr. EDMONDSON. Per capita income standard.

Mr. WETZEL. That is right. Particularly in view of the fact that the base of the economic existence, the coal mines, have been almost entirely abandoned.

Mrs. BLITCH. It is a depressed area then. Would you state again, if I may ask the witness, what the probability is of the people raising their share of the funds?

Mr. WETZEL. Of the $880,000 which the local people agreed to put up, $761,000 will be for the installation of the land treatment measures on their own farms. In other words, it is not a cash outlay, and out-of-pocket cost, for the landowners. That is the major part of the local contribution.

In addition, for the lands, easements, and rights-of-way plus the relocations and administration of the contracts, the out-of-pocket cost will be $119,000.

Mrs. BLITCH. How many people are affected in the area?

Mr. WETZEL. There are 500 farms in the watershed under the Oklahoma conservancy district law. Practically all of those farms will be subject to taxation in order to raise that necessary money for the lands, easements, and rights-of-way in varying degrees, depending on the magnitude of benefits that the individual farmer receives.

Mrs. Blitch. The $700,000-odd that you mentioned will be spent by the farmers themselves on the individual farms?

Mr. WETZEL. That is right. On their individual farms.

Mrs. BLITCH. That is part of the $800,000-odd cost? That is part of the local cost?

Mr. WETZEL. That is right, Mrs. Blitch. The total local funds required are $880,000, which is made up of $761,000 for the land treatment measures on the individual farms, plus the $119,000 primarily for lands, easements, and rights-of-way.

Mrs. BLITCH. Thank you very much.

Mrs. SMITH. Are there any other questions?

Mr. CRAMER. I have just one question.

How long did it take this project from the time it was cleared by the local conservancy group to clear the State?

Mr. WETZEL. Mr. Cramer, we do not have the date on which the application was submitted to them in the information we have. On the average project from the time we are able to approve it for planning, in other words, after the State agency approved the application and we have the facilities available to undertake the survey of the project, there is a period of some 4 to 6 months for the development of the work plan itself. After the work plan has been developed, then it goes out for a 30-day agency review period, at the termination of which we submit the plan to the Bureau of the Budget for transmittal to the Congress. So on the average plan it is about 1 year from the time we are in a position to start providing planning assistance until the time it is approved by the appropriating committees.

I might point out, we have now about 1,300 applications from local organizations, on which we have been able to provide technical assistance in developing the land to slightly more than 500. So there

are about 800 local organizations who have submitted applications that we are not in a position to provide any technical assistance to for the development of their work planning, on the basis of our present planning. Furthermore, we can produce about 100 work plans per year.

Mr. CRAMER. The question I was interested in—and that is valuable information too and I appreciate it—but the question I was primarily interested in is, from the time that the local conservancy district approves or indicates their willingness to go forward, and the time that the State board of conservation approves those requests which then are submitted to you people for your planning of the work, how long does that take? It seems to me that is where the problem lies.

Mr. WETZEL. That is certainly the major delay. It is our policy to request the State agency to recommend priorities for our planning approval, so it may be that the State agency would assign a top priority to an application we have had only for 30 days or so.

On the other hand, there may be some in our hands that have been there for as long as 5 years.

Mr. CRAMER. That is exactly the point I am getting at. How many locally approved projects are there that have local acceptance and approval of the local conservancy district in the area that have not been cleared by the States for your consideration? Do you have that information?

Mr. WETZEL. Roughly it would be that 800 figure I referred to. In other words, those 800 are awaiting a planning priority from the State agency. Also, all of our planning approvals will be selected from that group of 800 projects.

Mr. CRAMER. What is the limitation on the States which causes them to submit only a portion of those that have high priority?

Mr. WETZEL. Actually, Mr. Cramer, they submit all of the applications which they approve to the Secretary of Agriculture, but they lie dormant until such time as we have facilities available to provide technical assistance and at that time we ask them for their priority recommendations from among the unserviced applications.

Mr. CRAMER. Your facilities will permit you to handle about how many a year?

Mr. WETZEL. We can produce about 100 work plans a year.

Mr. CRAMER. So if there is a bottleneck it is largely in your department not having adequate personnel and facilities and funds to process these 800 that are standing by for planning approval by you people. Is that right?

Mr. WETZEL. That is right. There is this backlog of 800 applications. I believe each year we have had a definite amount established in our appropriation which might be utilized for planning purposes. So we are limited by the amount that is made available for that.

Mr. CRAMER. How much was that last year?

Mr. WETZEL. It was $4,900,000. It has been that for the last 3 years.

Mr. CRAMER. How much did you ask for?

Mr. WETZEL. Actually we were given that figure before we had any opportunity to make a request for our actual needs.

Mr. SMITH. Mr. Wetzel, without interrupting the conversation, that came from the Bureau of the Budget, didn't it?

Mr. WETZEL. That is right, sir.

Mr. SMITH. We can't question it then.

Mr. CRAMER. I think we all understood where it came from.

Mr. SMITH. I mean, that makes it sacrosanct. But go ahead.

Mr. CRAMER. What size personnel group do you think you could economically and properly handle for this purpose in processing more applications in the future, perhaps?

Mr. WETZEL. One of the problems, of course, is recruiting the trained personnel. It is a rather highly specialized job.

Mr. CRAMER. I realize that.

Mr. WETZEL. In a table in which the Department made predictions as to the rate of growth of this program, which is in the hearings before the Appropriations Committee, it was indicated that this year we could use $5½ million, with that amount increasing progressively at a half million per year up to 1963, when it would level off at about $7 million.

Mr. CRAMER. How many more plans would that permit you to process per year?

Mr. WETZEL. Do you have the figures on that?

Mr. BROWN. Roughly, we can process 100 plans with $5 million. I think you might relate that, Mr. Cramer, to the rate at which applications are coming in. We reached a high in the number of applications received in the fiscal year 1959, and that was about 265 applications. Last year, the 1960 fiscal year, that dropped off to 175, we believe because they didn't see any prospect in many instances of getting any help in planning.

However, if you take the average of 200 applications per year as a minimum, it would require approximately $10 million per year of planning funds just to keep up with the current rate of receipt of applications. If you considered the 800 applications not yet serviced and assumed that all of them were potentials for planning, and valid projects, it would take about 8 years at the current rate of appropriations to overcome that backlog, not considering the incoming new applications.

Mr. CRAMER. I for one, knowing what the problem is, not only in the State of Florida but throughout the country, am intending to take this up with some of the people in the Bureau to see if they will not take a second look at this. I have taken some other steps and I hope that the members of the committee will join with me in this.

But I do think as many of us as possibly can should press to get some more money, and get some of these programs processed.

Mr. BROWN. I would like to add this one comment, Mr. Cramer. It has been our position in the Department, and I think rightly so, that the programing should not be out of balance with the amount of construction funds.

Mr. CRAMER. I realize that.

Mr. BROWN. We estimate on the average $1 of planning will produce on the average of $20 of construction funds, so at the current rate of Federal input to planning we are building a program which will require about $100 million a year in about 3 years, and considering the fact that a good many States, including Oklahoma, have appropriated a very substantial amount of State funds to supplement the Federal planning funds, because they felt that Federal funds were inadequate.

Last year we had about $1,100,000 of non-Federal funds going into planning, and it seems like it will increase this year. So the total planning input at the present time is building a program which will require at least $120 million worth of construction funds in about 3 years.

Mr. CRAMER. What are the construction funds now? What was it last year?

Mr. BROWN. The total available funds this current fiscal year are about $30 million.

Mr. CRAMER. I understand you have a problem on that end too, and I think both of them need to be considered, or reconsidered.

Mr. WETZEL. I might just point out, Mr. Cramer, that we are certainly hearing from a lot of these local organizations who feel that they should be given planning assistance. We are helpless to give them that assistance until they do get the priority, and there is no question but what many of the local organizations who have already developed their applications have gotten discouraged and not started the application through the necessary channels.

Mr. CRAMER. I have four of them in my district sitting in exactly that position.

Mr. WETZEL. That is right, sir.

Mr. SMITH. Are you going to take up the Leader-Middle Clear Boggy Creek watershed?

Mr. WETZEL. No, Mr. Brown will take that.

Mr. SMITH. All right.

STATEMENT OF CARL B. BROWN, ASSISTANT TO THE ASSISTANT ADMINISTRATOR FOR WATERSHEDS, SOIL CONSERVATION SERVICE—Resumed

Mr. BROWN. Mr. Chairman, the Leader-Middle Clear Boggy Creek watershed in Oklahoma is located in Pontotoc and Coal Counties in that State, and is in the Arkansas White-Red River basin also.

This contains an area of 107,968 acres. It is jointly sponsored by the Soil Conservation Districts of Pontotoc and Coal Counties, and the Upper Clear Boggy Soil and Water Conservancy District, a legal organization having the right of taxation and the power of eminent domain.

This area, like the Fourche Maline area, has been one of extremely severe and frequent flooding over a long period of time. This watershed has experienced flooding in some of the flood plain areas as much as 13 times in 1 year. In 1957 there were five floods which covered substantially all of the flood plain acreage in that 1 year. There have been a total of 43 major floods and 30 minor floods during the past 20 years, which our investigation covered.

This area has a land use at the present time for the total watershed of about 35 percent in cropland mainly in alfalfa, corn, and oats, and about 30 percent in grassland and about 33 percent in woodland.

One of the striking features of this project is the opportunity that will be afforded by this project of permitting a very desirable conversion of land use from the upland areas into the bottom lands if they can be given adequate protection.

For example, at the present time, because of the frequency of flooding in the bottom land area, only 13 percent of the area shown in green is used for cropland, and 35 percent is in wooded pasture, and 34 percent is in improved pasture, with the remainder in other uses.

We have estimated from a very careful review with the landowners in the area that as a result of this project the total cropland in the watershed will decrease from 35 percent to 24 percent, and grassland will be increased from 30 percent to 46 percent. But in the bottom land the cultivated area will increase from 13 percent to 37 percent, while other uses will decrease proportionately.

In other words, with a net decrease in the total amount of land under cultivation in the watershed of a substantial amount, it is expected that the net farm income will rise substantially because of the opportunity to make that needed and conservation type of land use adjustment, a factor which we believe is important in many watersheds of this Nation in the solution of some of our farm problems.

This watershed is 99 percent in private ownership and includes farm units having an average size in Pontotoc County of 250 acres, and in Coal County of about 340 acres. The average farm value, however, is about $10,000 in Pontotoc County for the 250-acre farms, and about $8,000 in Coal County for the 340-acre farms. So you can see that this falls into the category you referred to previously with respect to the projects in areas in some other States. It is not a very profitable farming area at the present time in terms of land values, at least.

The project proposed here, in addition to the usual land treatment measures and land use adjustments, will consist of 43 floodwater retarding structures shown on the map, having a total capacity of 38,631 acre-feet, the largest having 5,000 acre-feet of floodwater detention capacity, and some 700 acre-feet in sediment capacity.

The total overflow area that will be benefited below the structures is 10,128 acres. The total number of landowners owning land in this flood plain area is 150. That land has an estimated value of $150 per acre with the protection afforded.

The project will reduce the present average annual damages by 82 percent. The amount of average annual damages is calculated at $186,000. The project has an unusually favorable benefit-cost ratio of 3.3 to 1.

The total cost of this project is $2,530,000, of which the Federal cost will be $1,230,000, or 49 percent, and the local cost will be $1,300,000, or 51 percent.

As in the case of the previous project, the bulk of that local cost will be the cost to individual landowners of making these land use adjustments and applying the conservation practices needed.

For the structural measures alone, the total cost will be $1,413,000, of which the Federal cost will be $1,156,000, and the local cost is $257,000, primarily for lands, easements and rights-of-way.

This project is scheduled for installation over an 8 year period. The conservancy district will secure the lands, easements, and rights-of-way. They will levey a tax for the purpose of maintenance and for the purpose of acquiring any easements that must be acquired by condemnation procedures. They will let and award the contracts. They have guaranteed the maintenance, which is estimated to cost $422 annually.

In addition to the benefits I have described, this project is above the authorized Boswell Reservoir of the Corps of Engineers. If that reservoir is constructed, this project will have a very significant effect in the reduction of sediment going into that reservoir and prolong its life.

I believe that is all on this project, Mr. Chairman.

Mr. SMITH. Thank you, Mr. Brown.

Are there any questions from my right?

Mr. SCHWENGEL. What explains the difference in the comparative size of the farms of the two counties?

Mr. BROWN. I am not sure I could answer that, Mr. Schwengel. I am not familiar enough with the area to say why there is the difference. It appears that the farms in Coal County are somewhat larger and somewhat less valuable on the basis of appraised average value than they are in Pontotoc County. So I would assume that there are differences in topography, and so on, and that Coal County is somewhat a poorer county than the other.

Mr. SMITH. The next project we have is the third one listed, the Upper Bear Creek watershed.

Mr. BROWN. The Upper Black Bear Creek watershed. It is that kind of bear they have down there, or had at one time.

This project is located in Garfield, Noble, and Pawnee Counties also in the Arkansas White-Red River Basin, and is sponsored jointly by the soil conservation districts in those three counties, and by the Black Bear Conservancy District, a district having similar authorities to those described for the other watersheds.

This is a larger watershed almost maximum size. It contains 241,546 acres, including 15,873 acres of bottomland subject to flooding below the sites of the structures.

This watershed is in a somewhat better farming area. It contains about 52 percent of the land now in crops, primarily in wheat and alfalfa; about 40 percent is in native range. It is not anticipated in any case that any significant land-use adjustment will take place or will be needed.

The landownership in the watershed as a whole contains 1,322 farms. The average size of those farms is 332 acres, most of them consisting of both cropland and rangeland. The average value of the farms, including the land and buildings in this watershed, is appraised at $27,000, which is two to three times the value of the farms in the project I have just described.

The proposed program in this watershed will include, in addition to the usual conservation practices on the land, a total of 76 floodwater retarding structures, having a total capacity of 68,496 acre-feet, the largest structure in this watershed being 4,539 acre-feet in total capacity.

This watershed has likewise been one which has had severe flooding over a period of a good many years. It is estimated that this project would eliminate entirely 43 of the 99 floods which have occurred during the past 25-year period, and would substantially reduce the flooding from the remainder of those floods.

The average annual damage reduction in this project will be 68 percent, and the damage reduction benefits are estimated at $206,000 annually.

In addition to the benefits on this flood plain area directly, this project is above the authorized Keystone Reservoir of the Corps of Engineers on the Arkansas River, and will contribute materially to the reduction of silting in that major reservoir and in its protection.

This project will cost a total of $4,409,000, of which the Federal cost will be $2,627,000, or 60 percent, and the local cost will be $1,781,000, or 40 percent.

Here again the major part of that local cost is for the land treatment measures; but the appraised local cost for the lands, easements and rights-of-way, and for administering the contracts is substantial in this case.

The total structural program will cost $3,205,000, of which the Federal share will be $2,568,000, or 80 percent, and the local share will be $637,000, or 20 percent.

The project has a benefit-cost ratio of 1.5 to 1, and it is proposed that it be installed over a period of 5 years. The average estimated annual maintenance cost will be $7,535, which has been guaranteed by the conservancy district.

Mr. SMITH. Thank you, Mr. Brown.

Are there any questions on my right?

Any questions on my left?

Mr. BALDWIN. Mr. Brown, I noticed in each one of these you included a statement that the project will be installed in a certain number of years. This one will be 5 years and the previous one 8 years, and the one before that 10 years.

You assume an evaluation. As far as the Corps of Engineers projects are concerned, we never predict, because the Corps of Engineers does not ever know how long it will be before funds are allocated for the project to start with, let alone how long it will be before it is completed. Up to now, have you been able pretty much to carry through your timetables on these projects in accordance with the estimate you made when you started? Have the funds usually been cleared by the Bureau of the Budget and been appropriated so that you can carry out these timetables?

Mr. BROWN. I would like to answer the question this way, Mr. Baldwin: The timetables that have been set up on most of the projects have been overoptimistic. The delays in moving ahead in accordance with those timetables, however, have not been up to this point due to a lack of Federal funds. It has primarily been the inability of local organizations to acquire the easements and rights-of-way as rapidly as they believed they could at the time that the project was approved.

We have encouraged the local organizations to estimate a completion as rapidly as they believed their resources would permit them to do so. What the situation will be from this point on is a matter of conjecture, because the appropriations available for this current fiscal year will not be sufficient to award all of the contracts that local people think they will be ready to award this fiscal year.

Mr. BALDWIN. This is about the first year that situation existed, is it not?

Mr. BROWN. That is right, Mr. Baldwin. If they are able to meet the commitments they think they can meet, some contracts may have to be deferred in the spring quarter of this year, but then again, they may have been overoptimistic in some cases, and we may squeeze

through, or nearly squeeze through, for the next appropriation available. That remains to be seen.

Mr. CRAMER. Will the gentleman yield?

Mr. BALDWIN. Yes.

Mr. CRAMER. In that period you mentioned, is that not the period estimated for the completion of construction and not the anticipated commencement?

Mr. BROWN. It is the estimated period of operation on the project.

Mr. CRAMER. That is right.

Mr. BROWN. They set up a schedule which is included in the work plan here of what funds are expected to be needed in each of the fiscal years in that 5- or 8-year time schedule. In the first year the funds needed are ordinarily funds required for doing the detailed designs and final investigation on the foundation on the dam, and that sort of thing. It is not very common to award a contract on a unit of construction in less than 12 months from the time of approval of the project. We have to go through this detailed design stage, just as the Corps of Engineers does on a major project.

We are prepared in all cases on all of the projects that are approved to provide funds for this design phase of the work. So you don't get, or would not get, into the delay period until after the first year of operation anyhow.

Mr. CRAMER. Thank you.

Mr. BROWN. Thank you.

Mr. SMITH. Thank you, Mr. Brown.

We now have the Michigan project.

Mr. BROWN. Mr. Wetzel will explain this one, Mr. Chairman.

Mr. SMITH. All right.

STATEMENT OF JOHN H. WETZEL, DIRECTOR, WATERSHED PLANNING DIVISION, SOIL CONSERVATION SERVICE—Resumed

Mr. WETZEL. The fourth project today is the proposal for Misteguay Creek in Saginaw, Shiawasse, and Genesee Counties in Michigan.

Misteguay Creek is in the Great Lakes Basin. It is a tributary to the old Flint River Channel about 7 miles upstream from the city of Saginaw. It is 103,000 acres in size and is sponsored by 10 different local organizations. Those are involved including the Saginaw, Shiawassee Soil Conservation Districts, and the Genesee County Soil Conservation District, as well as several local county or intercounty drainage districts.

In the State of Michigan much of the authority required to carry out these projects is embodied in the authority of the county drainage districts, and they cooperate with the soil conservation districts in carrying out the project. This project is a combination flood prevention and drainage project. There has been a long history of flooding in the lower third—at the top of the map here—the lower third of the watershed.

The Misteguay Creek is diked throughout most of that area. However, the dikes are inadequate and there has been constant breaking of dikes and flooding of the agricultural land.

It is interesting that since 1946 there has been an injunction against drainage districts in the entire Misteguay watershed, prohibiting them from developing any new drainage channels, or even maintaining the

existing drainage channels, due to the feeling that any drainage work in the upper watershed here would increase the flood chances in the lower section of the watershed. As a result, most of the watershed is pretty well lying dormant, since 1946. The court has indicated that if the intercounty drainage districts will clean out the lower portion of the main channel from Burke Road, which is at this point, they will clean out that channel not as a part of the Public Law 566 project, but the injunction against doing anything in the upper watershed will be lifted by the court. This project will be dependent on that injunction being lifted by the court.

Planning funds are already available through the Intercounty Drainage District to clean out this work in the lower section of the channel.

The average annual flood damage in the watershed is $208,000. The most recent flood was in July 1957, when 6,900 of the 8,100 acres of flood plain land were inundated.

The entire watershed is in need of drainage for agricultural purposes, which will be carried out as a part of the total project, with the local people providing the on-farm drainage and the flood channels being constructed as combination drainage and flood channels.

Land use in the watershed at the present time is 69 percent in cropland, the principal crops being wheat, soybeans, sugar beets, and navy beans; 42 percent is in woodland, and 17 percent in miscellaneous uses. It is entirely in private ownership.

There are about 1,350 farms in the watershed, with an average size of about 80 acres. The measures proposed include land treatment measures of cover crops, drainage waterworks, diversion planning and woodland protection, and several other measures.

The structural measures proposed include three floodwater retarding structures as shown on the map, with the largest being 4,184 acre-feet.

In addition, they are proposing 5½ miles of levees in the uppper watershed, and 27 miles of drainage channel throughout the watershed.

The area that will be benefited by the drainage component of the project is 45,000 acres, of which about 85 percent is cropland. The number of farms that will be benefited from the combination project is 60 that will be benefited from reduced floodwater damage, and 575 farmers will be benefited from the drainage measures to be carried out.

The proposed project will provide a level of protection whereby 91 percent of the flood plain land will have complete protection from floods of a 25-year frequency.

As far as the costs of the project are concerned, the total costs are $3,743,000, of which the local people will put up 81 percent, or $3,040,000. Public Law 566 costs will be $703,000, or 19 percent.

The major part of the local contribution will be in the form of land treatment measures, or $2,612,000 to be provided by the landowners in installing land treatment measures on their own lands. In addition, the local people will provide $238,000 for the necessary lands, easements, and rights-of-way and relocation of highways, bridges, and the administration of contracts, and they will make a cash contribution toward the cost of the drainage allocation of $189,000. In other words, local people will pay 65 percent of the cost of the structural measures for drainage, and the Federal Government will pay 33 percent of that cost.

The additional costs to be borne by the local organizations include $21,000 for the administration of contracts; $108,000 for the relocation of bridges and highways; and $243,000 for lands, easements, and rights-of-way.

The benefit-cost ratio on this project, as with most projects having a large drainage allocation, is 9.6 to 1. It is proposed for an installation period of 5 years.

In carrying out the plan, each of the sponsoring drainage districts have assumed the responsibility for carrying out the portion of the plan lying within their legal jurisdiction. The drainage districts also have guaranteed the cost of operation and maintenance for $11,166.

The Corps of Engineers currently are carrying out the planning of a project for flood control in the lower Saginaw Valley, and this proposed project has been completely coordinated with that project, being planned by the Corps of Engineers.

This area up here is a privately owned area known as the Brayer farm, which is completely enclosed by dikes constructed at private cost. The dikes are adequate to provide necessary flood protection for that large farm but no flood benefits are being claimed in that particular area.

Mr. SMITH. Thank you very much, Mr. Wetzel. Are there any questions on my right? Thank you very much, Mr. Wetzel and Mr. Brown for your presentations this morning.

(Whereupon at 11:15 a.m. the open hearing was concluded and the committee went into executive session.)

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